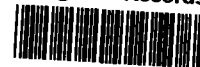


**STS CONSULTANTS**STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061voice 847-279-2500
fax 847-279-2510
web www.stsconsultants.com

November 12, 2004

EPA Region 5 Records Ctr.



226813

Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for October 2004, 221 N. Columbus Drive, Chicago, Illinois - STS
Project No. 1-32193-XC

Dear Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies the actions taken in October and activities planned for November 2004.

ACTIVITIES COMPLETED IN OCTOBER 2004

1. Construction of a new building (the Regatta) was initiated in September. The Regatta is located immediately north of the Shoreham building along the northern boundary of the Lakeshore East site. The southern portion of the building lot is located within the former boundaries of the north slip. Thus, radiological surveying will be periodically conducted for construction related activities that result in the disturbance of subsurface soil within the former slip area.
2. The initial surveying for radiologically-impacted soil at the Regatta site occurred in mid and late September in areas designated for the installation of caissons. Prescreening of the fill soil at each caisson location within the north slip was performed via test pitting to verify the absence of radiologically-impacted soil and avoid potential construction delays associated with the discovery of radiologically-impacted soil during caisson installation. Spoil from each test pit was returned to the excavation if gamma readings do not indicate a level indicative of an impact.
3. No radiologically-impacted soils were excavated in October. Therefore, neither personal nor area air monitoring was conducted.

PLANNED ACTIVITIES FOR NOVEMBER 2004

1. Surveying for radiologically-impacted soil at the Regatta site will continue to be performed periodically for utility and construction related activities that will occur within the boundaries of the former north slip area. Specifically, it is anticipated that the installation of caissons will begin in November with monitoring conducted at those caissons located within the boundary of the former slips.
2. The USEPA will be notified upon discovery of any radiologically-impacted materials. Following USEPA notification, excavation activities will take place to remediate radiologically-impacted soil as necessary. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.


US Environmental Protection Agency - Region 5
STS Project No. 1-32193-XC
November 12, 2004
Page 2

3. Comments on the Completion Report and Addendum were received from USEPA on November 2, 2004. Responses to the comments are being developed and will be submitted in November.
4. Monthly reports will continue to be submitted to the USEPA until approval of the closure report is received.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.


Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Greenberg Traurig
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

STS Consultants, Ltd.

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510

**FACSIMILE TRANSMISSION****Date:** November 12, 2004**To:** Fred Micke USEPA Fax #: 312-353-9176

Kara Hughes Lakeshore East, LLC Fax #: 312-642-2773

Sean Bezark Greenberg Traurig Fax #: 312-456-8435

Barbara Magel Karaganis, White & Magel Ltd. Fax #: 312-836-9083

Mark Krippel Kerr-McGee Chemical LLC Fax #: 630-231-3990

Pages being transmitted, Incl. Cover: 3**CC:** **Fax No.:****From:** Steve Kornder **Phone:** 847-279-2500**Re:** Lakeshore East, 221 N. Columbus Dr., Chicago, IL☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow**Message:**

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**STS CONSULTANTS**STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061-3153voice 847-279-2500
fax 847-279-2510
web www.stsconsultants.com

October 15, 2004

Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for September 2004, 221 N. Columbus Drive, Chicago, Illinois -
STS Project No. 1-32193-XC

Dear Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies the actions taken in September and activities planned for October 2004.

ACTIVITIES COMPLETED IN SEPTEMBER 2004

1. Construction of a new building (the Regatta) was initiated in September. The Regatta is located immediately north of the Shoreham building along the northern boundary of the Lakeshore East site. The southern portion of the building lot is located within the former boundaries of the north slip. Thus, radiological surveying will be conducted for construction related activities that result in the disturbance of subsurface soil within the former slip area.
2. The initial surveying for radiologically-impacted soil at the Regatta site occurred in mid and late September in areas designated for the installation of caissons. Prescreening of the fill soil at each caisson location within the north slip was performed via test pitting to verify the absence of radiologically-impacted soil and avoid potential construction delays associated with the discovery of radiologically-impacted soil during caisson installation. Spoil from each test pit will be returned to the excavation if gamma readings do not indicate a level indicative of an impact.
3. Radiologically-impacted soils were not excavated for disposal in September. Therefore, neither personal nor area air monitoring was conducted.

PLANNED ACTIVITIES FOR OCTOBER 2004

1. Surveying for radiologically-impacted soil at the Regatta site will continue to be performed in October at caissons located with the former north slip area. The surveying will be conducted in a manner similar to that conducted in September (see discussion above).
2. The USEPA will be notified upon discovery of any radiologically-impacted materials. Following USEPA notification, excavation activities will take place to remediate radiologically-impacted soil as necessary. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

US Environmental Protection Agency - Region 5
STS Project No. 1-32193-XC
Page 2

3. Monthly reports will to be submitted to the USEPA until approval of the closure report.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.


Steven C. Komder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Greenberg Traurig
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

STS Consultants, Ltd.

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510

**FACSIMILE TRANSMISSION****Date:** October 15, 2004**To:** Fred Micke USEPA Fax #: 312-353-9176

Kara Hughes Lakeshore East, LLC Fax #: 312-642-2773

Sean Bezark Greenberg Traurig Fax #: 312-456-8435

Barbara Magel Karaganis, White & Magel Ltd. Fax #: 312-836-9083

Mark Krippe! Kerr-McGee Chemical LLC Fax #: 630-231-3990

Pages being transmitted, Incl. Cover: 3**CC:** **Fax No.:****From:** Steve Kornder **Phone:** 847-279-2500**Re:** Lakeshore East, 221 N. Columbus Dr., Chicago, IL.☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow**Message:**

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I-1

5-14-04



STS CONSULTANTS

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web www.stsconsultants.com

May 14, 2004

Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for April 2004, 221 N. Columbus Drive, Chicago, Illinois - STS Project
No. 1-32193-XC

Dear Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies the actions taken in April and activities planned for May 2004.

PROGRESS DURING APRIL 2004

1. Surveying for radiologically-impacted soil continued was performed on a periodic basis for utility excavations conducted at the Shoreham site located within the north slip (slip D). No evidence of radiologically-impacted soil was observed.
2. No radiologically impacted soils were handled or excavated in April 2004. Therefore, neither personal nor area air monitoring was conducted.

PLANNED ACTIVITIES FOR MAY 2004

1. The caisson and grade beam excavation activities associated with the Shoreham are generally complete. Thus, there are no specific dates planned for conducting excavation activities that will expose subsurface soil within the former slip areas. However, surveying for radiologically-impacted soil will be conducted within the slip areas if excavation occurs. The USEPA will be notified upon discovery of any radiologically-impacted materials. Following USEPA notification, excavation activities will take place to remediate radiologically-impacted soil as necessary. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
2. Monthly reports will to be submitted to the USEPA until approval of the closure report.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.

Craig Paulson
Steven J. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Greenberg Traurig
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

STS Consultants, Ltd.

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510



FACSIMILE TRANSMISSION

Date: May 14, 2004

To: Fred Micke

USEPA

Fax #: 312-353-9176

Kara Hughes

Lakeshore East, LLC

Fax #: 312-642-2773

Sean Bazark

Greenberg Traurig

Fax #: 312-476-5027

Barbara Magel

Karaganis, White & Magel Ltd.

Fax #: 312-836-9083

Mark Krippel

Kerr-McGee Chemical LLC

Fax #: 630-231-3990

Pages being transmitted, incl. Cover: 2

CC:

Fax No.:

From: Steve Komdar

Phone: 847-279-2500

To: Lakeshore East, 221 N. Columbus Dr., Chicago, IL

☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow

Message:

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I.1
4-12-04

April 12, 2004

Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for March 2004, 221 N. Columbus Drive, Chicago, Illinois - STS Project
No. 1-32193-XC

Dear Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies the actions taken in March and activities planned for April 2004.

PROGRESS DURING MARCH 2004

1. Surveying for radiologically-impacted soil continued to be performed on a periodic basis for grade beam and caisson excavations conducted at the Shoreham site, which is located within the north slip (slip D). No evidence of radiologically-impacted soil was observed.
2. No radiologically impacted soils were handled or excavated in March 2004. Therefore, neither personal nor area air monitoring was conducted.

PLANNED ACTIVITIES FOR APRIL 2004

1. The caisson and grade beam excavation activities associated with the Shoreham are generally complete. Thus, there are no specific dates planned for conducting excavation activities that will expose subsurface soil within the former slip areas. However, surveying for radiologically-impacted soil will be conducted within the slip areas if excavation occurs. The USEPA will be notified upon discovery of any radiologically-impacted materials. Following USEPA notification, excavation activities will take place to remediate radiologically-impacted soil as necessary. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
2. Monthly reports will to be submitted to the USEPA until approval of the closure report.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.


Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Greenberg Traurig
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

STS Consultants, Ltd.

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510

**FACSIMILE TRANSMISSION****Date:** April 12, 2004

To: Fred Micke	USEPA	Fax #: 312-353-9176
Kara Hughes	Lakeshore East, LLC	Fax #: 312-642-2773
Sean Bezark	Greenberg Traurig	Fax #: 312-476-5027
Barbara Magel	Karaganis, White & Magel Ltd.	Fax #: 312-836-9083
Mark Krippel	Kerr-McGee Chemical LLC	Fax #: 630-231-3990

Pages being transmitted, incl. Cover: 2**CC:****Fax No.:****From:** Steve Kornder**Phone:** 847-279-2500**Rec:** Lakeshore East, 221 N. Columbus Dr., Chicago, IL

☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow

Message:

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150 Corporate Woods Parkway
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voice 847-279-2500
fax 847-279-2510
web www.stsconsultants.com

March 15, 2004

3/15/04
JL

Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for February 2004, 221 N. Columbus Drive, Chicago, Illinois - STS
Project No. 1-32193-XC

Dear Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies the actions taken in February and activities planned for March 2004.

PROGRESS DURING FEBRUARY 2004

1. Surveying for radiologically-impacted soil continues to be performed on a periodic basis for infrastructure related activities within the former slips area. Surveys of grade beam excavations were conducted periodically in February at the Shoreham site, which is located within the north slip (slip D). No evidence of radiologically-impacted soil was observed.
2. No radiologically impacted soils were handled or excavated in February 2004. Therefore, neither personal nor area air monitoring was conducted.

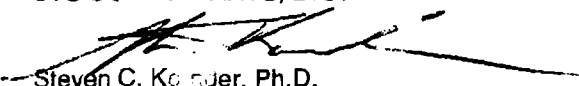
PLANNED ACTIVITIES FOR MARCH 2004

1. There are currently no specific dates for conducting infrastructure activities that will expose subsurface soil within the former slip areas. However, surveying for radiologically-impacted soil will be conducted within the former north slip area where excavations will occur for caissons and grade beams. The USEPA will be notified upon discovery of any radiologically-impacted materials. Following USEPA notification, excavation activities will take place to remediate radiologically-impacted soil as necessary. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
2. Monthly reports will to be submitted to the USEPA until approval of the closure report.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.



Steven C. Konder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Greenberg Traurig
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

STS Consultants, Ltd.

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2500

**FACSIMILE TRANSMISSION****Date:** March 15, 2004

To: Fred Micke	USEPA	Fax #: 312-353-9176
Kara Hughes	Lakeshore East, LLC	Fax #: 312-642-2773
Sean Bezark	Greenberg Traurig	Fax #: 312-476-5027
Barbara Magel	Karaganis, White & Magel Ltd.	Fax #: 312-836-9083
Mark Krippel	Kerr-McGee Chemical LLC	Fax #: 630-231-3990

Pages being transmitted, incl. Cover: 2**CC:****Fax No.:****From:** Steve Komder**Phone:** 847-279-2500**Re:** Lakeshore East 221 N. Columbus Dr., Chicago, IL

☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow

Message:

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STS Consultants, Ltd.

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510

FACSIMILE TRANSMISSION

Date: November 18, 2003

To: Fred Micke	USEPA	Fax #: 312-353-9176
Kara Hughes	Lakeshore East, LLC	Fax #: 312-642-2773
Sean Bezark	Greenberg Traurig	Fax #: 312-476-5027
Barbara Magel	Karaganis, White & Magel Ltd.	Fax #: 312-836-9083
Mark Krippel	Kerr-McGee Chemical LLC	Fax #: 630-231-3990

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CC: **Fax No.:**

From: Steve Kornder **Phone:** 847-279-2500

Re: Lakeshore East, 221 N. Columbus Dr., Chicago, IL

☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow

Message:

Monthly report for October

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November 15, 2003

Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for October 2003, 221 N. Columbus Drive, Chicago, Illinois - STS
Project No. 1-32193-XC

Dear Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies the actions taken in October 2003 and activities planned for November 2003.

PROGRESS DURING OCTOBER 2003

1. Surveying for radiologically-impacted soil continues to be performed on a periodic basis for infrastructure related activities within the former slips area. During October, survey activities were conducted primarily at future caisson locations within the former northern slip. Evidence of elevated gamma readings was observed at several small areas located within close proximity to one another on October 9. These areas were designated as exclusion zones. No other areas of elevated gamma reading were observed during the remainder of the October surveying.
2. On October 29, 2003, remediation was initiated for of the areas identified on October 9. The areas were designated as exclusion zones 13D East, 13D West and Caisson C.2-3. The remedial activities were conducted on October 29 - 31 and on November 7. Table 1 below summarizes the quantity of radiologically-impacted material excavated in October and on November 7. The table also provides a cumulative total for the site.

Table 1
Impacted Soil Loading Summary

Date	Containers Loaded	Cumulative Project Total
October, 2003	11	251
November 7, 2003	3	254

3. Verification surveys of the remediated exclusion zones were performed by the USEPA contractor on November 11 and notices of successful verification signed by the USEPA on November 12, 2003.
4. Personal and area air monitoring was conducted during the excavation of radiologically-impacted soil in October and on November 7, 2003. No exceedances of the allowable limits for personal or area air monitoring were observed. Results for the air monitoring conducted during the week of October 27 and on November 7 are included within Attachment 1.
5. Pursuant to a verbal approval by the USEPA, samples not associated with verification surveys were disposed of with the impacted soil remediated during October. The remaining verification samples await pickup by the USEPA.

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.



US Environmental Protection Agency - Region 5
STS Project No. 1-32193-XC
November 15, 2003
Page 2

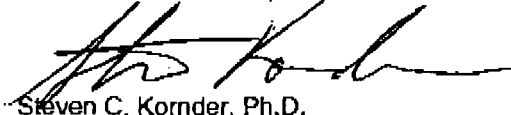
PLANNED ACTIVITIES FOR NOVEMBER 2003

1. There are currently no immediate plans for conducting infrastructure activities that will expose subsurface soil within the former slip areas. Surveying for radiologically-impacted soil will resume when project activities have the potential to exposed subsurface soil within the former slips area. The USEPA will be notified upon discovery of any radiologically-impacted materials. Excavation activities will take place as necessary to remediate radiologically-impacted soil. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
2. Monthly reports will to be submitted to the USEPA until approval of the closure report.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.



Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Greenberg Traurig
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

ATTACHMENT 1

Air Monitoring

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor

Report #33 10/27/03 - 10/31/03

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
10/27/03	0	0.00E+00	0.00E+00	No Work
10/28/03	0	0.00E+00	0.00E+00	No Work
10/29/03	307	0.00E+00	0.00E+00	
10/30/03	349	0.00E+00	0.00E+00	
10/31/03	382	0.00E+00	0.00E+00	
	1038	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) =

0.00E+00 uCi/ml

Percentage of Release Limit of =

0.00%

4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
10/27/03	0	0.00E+00	0.00E+00	No Work
10/28/03	0	0.00E+00	0.00E+00	No Work
10/29/03	304	1.71E-15	5.20E-13	
10/30/03	348	1.78E-15	6.12E-13	
10/31/03	383	0.00E+00	0.00E+00	
	1035	3.47E-15	1.13E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) =

1.09E-15 uCi/ml

Percentage of Release Limit of =

27.35%

4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
10/27/03	0	0.00E+00	0.00E+00	No Work
10/28/03	0	0.00E+00	0.00E+00	No Work
10/29/03	302	0.00E+00	0.00E+00	
10/30/03	347	0.00E+00	0.00E+00	
10/31/03	384	2.12E-15	8.14E-13	
	1033	2.12E-15	8.14E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) =

7.88E-16 uCi/ml

Percentage of Release Limit of =

19.70%

4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
10/27/03	0	0.00E+00	0.00E+00	No Work
10/28/03	0	0.00E+00	0.00E+00	No Work
10/29/03	310	0.00E+00	0.00E+00	
10/30/03	354	7.20E-18	2.55E-13	
10/31/03	373	8.00E-18	2.98E-13	
	1037	1.52E-15	5.53E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly	
Effluent Concentration (West) =	5.34E-16 uCi/ml
Percentage of Release Limit of =	13.34%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Report No. 33

October 27, 2003 - October 31, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit
							date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/ml	
N2083	10/29/03	8:56am	2:03pm	307	47	1.43E+07	10/30/03	88	12	2.48887	8.27E-14	11/3/03	12	12	0	0.00E+00	0.00%
S2083	10/29/03	8:01am	2:05pm	304	47	1.42E+07	10/30/03	52	12	1.33333	3.42E-14	11/3/03	14	12	0.007	1.71E-15	42.78%
E2083	10/29/03	8:58am	2:00pm	302	48	1.38E+07	10/30/03	47	12	1.16687	3.08E-14	11/3/03	12	12	0	0.00E+00	0.00%
W2083	10/29/03	8:50am	2:00pm	310	49	1.51E+07	10/30/03	87	12	1.63333	4.43E-14	11/3/03	9	12	0	0.00E+00	0.00%
N2084	10/30/03	8:25am	2:14pm	349	44	1.52E+07	10/31/03	52	13	1.3	3.11E-14	11/4/03	11	11	0	0.00E+00	0.00%
S2084	10/30/03	8:22am	2:10pm	346	40	1.38E+07	10/31/03	142	13	4.3	1.13E-13	11/4/03	13	11	0.007	1.78E-15	43.92%
E2084	10/30/03	8:28am	2:16pm	347	41	1.41E+07	10/31/03	89	13	1.88887	4.81E-14	11/4/03	10	11	0	0.00E+00	0.00%
W2084	10/30/03	8:23am	2:17pm	364	48	1.69E+07	10/31/03	87	13	1.8	3.89E-14	11/4/03	12	11	0.033	7.20E-16	17.99%
N2085	10/31/03	8:21am	2:43pm	382	45	1.70E+07	11/3/03	18	12	0.2	4.27E-15	11/7/03	10	11	0	0.00E+00	0.00%
S2085	10/31/03	8:23am	2:48pm	383	42	1.59E+07	11/3/03	22	12	0.33333	7.80E-15	11/7/03	11	11	0	0.00E+00	0.00%
E2085	10/31/03	8:23am	2:47pm	384	45	1.71E+07	11/3/03	23	12	0.38887	7.78E-15	11/7/03	14	11	0.1	2.12E-15	53.07%
W2085	10/31/03	8:28am	2:41PM	373	41	1.52E+07	11/3/03	17	12	0.18887	4.00E-15	11/7/03	12	11	0.033	8.00E-16	19.99%
Wednesday 10/29/03 through Friday 10/31/03 were the only days during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days.							** 4-day analysis of samples collected on 10/31/03 not analyzed until 11/7/03 because work was rained out on 11/5/03 & 11/6/03										

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Report No. 33 October 27 - October 31, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
10/29/03	Odell Morgan	PAM2261	002-574	2.5	384	960000	10/30/03	19	12	0.03	8.84E-15*
10/29/03	Glenn Huber	PAM2262	006-234	2.5	384	960000	10/30/03	16	12	0.20	5.30E-14*
10/30/03	Odell Morgan	PAM2263	002-574	2.5	385	912500	10/31/03	17	13	0.13	3.72E-14*
10/30/03	Glenn Huber	PAM2264	006-234	2.5	365	912500	10/31/03	12	13	0.00	0.00E+00
10/31/03	Odell Morgan	PAM2265	002-574	2.5	395	967500	11/3/03	11	12	0.00	0.00E+00
10/31/03	Glenn Huber	PAM2266	006-234	2.5	395	967500	11/3/03	12	12	0.00	0.00E+00

Wed 10/29 - Fri 10/31 were the only days during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days.

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Report No. 33 October 27 - October 31, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
10/28/03	Odell Morgan	PAM2281	008-234	2.5	384	960000	11/3/03	12	12	0.00	0.00E+00	0.00%
10/28/03	Glenn Huber	PAM2282	002-574	2.5	384	860000	11/3/03	10	12	0.00	0.00E+00	0.00%
10/30/03	Odell Morgan	PAM2283	002-574	2.5	365	912500	11/4/03	10	11	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor

Report #34 11/3/03 - 11/7/03

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
11/3/03	0	0.00E+00	0.00E+00	No Work
11/4/03	0	0.00E+00	0.00E+00	No Work
11/5/03	0	0.00E+00	0.00E+00	No Work
11/6/03	0	0.00E+00	0.00E+00	No Work
11/7/03	348	1.50E-15	5.19E-13	
	348	1.50E-15	5.19E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 1.50E-15 uCi/ml

Percentage of Release Limit of = 37.50%
4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
11/3/03	0	0.00E+00	0.00E+00	No Work
11/4/03	0	0.00E+00	0.00E+00	No Work
11/5/03	0	0.00E+00	0.00E+00	No Work
11/6/03	0	0.00E+00	0.00E+00	No Work
11/7/03	336	0.00E+00	0.00E+00	
	336	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
11/3/03	0	0.00E+00	0.00E+00	No Work
11/4/03	0	0.00E+00	0.00E+00	No Work
11/5/03	0	0.00E+00	0.00E+00	No Work
11/6/03	0	0.00E+00	0.00E+00	No Work
11/7/03	336	0.00E+00	0.00E+00	
	336	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration In uCi/ml	Concentration x Sample Min / Day	Comments
11/3/03	0	0.00E+00	0.00E+00	No Work
11/4/03	0	0.00E+00	0.00E+00	No Work
11/5/03	0	0.00E+00	0.00E+00	No Work
11/6/03	0	0.00E+00	0.00E+00	No Work
11/7/03	339	0.00E+00	0.00E+00	
	339	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i \cdot C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly	
Effluent Concentration (West) =	0.00E+00 uCi/ml
Percentage of Release Limit of =	0.00%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Report No. 34

November 3, 2003 - November 7, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/ml	
N2088	11/7/03	8:12am	1:58pm	348	47	1.81E+07	11/10/03	16	13	0.1	2.28E-16	11/11/03	16	13	0.087	1.50E-15	37.80%
S2088	11/7/03	8:14am	1:52pm	338	47	1.57E+07	11/10/03	13	13	0	0.00E+00	11/11/03	13	13	0	0.00E+00	0.00%
E2088	11/7/03	8:17am	1:53pm	336	45	1.50E+07	11/10/03	14	13	0.03333	8.08E-16	11/11/03	12	13	0	0.00E+00	0.00%
W2088	11/7/03	8:11am	1:50pm	338	44	1.48E+07	11/10/03	10	13	0	0.00E+00	11/11/03	12	13	0	0.00E+00	0.00%
<p>Friday November 7, 2003 was the only day during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days.</p>																	

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Report No. 34 November 3 - November 7, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
11/7/03	Glenn Huber	PAM2287	008-224	2.5	350	850000	11/10/03	11	13	0.00	0.00E+00
11/7/03	Odell Morgan	PAM2288	002-574	2.5	380	950000	11/10/03	13	13	0.00	0.00E+00

Friday November 7, 2003 was the only day during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days.

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Report No. 34 November 3 - November 7, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

****Note:** All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
No 4 day analysis of PAM's required for this monitoring period												

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = $5E-13$ uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = $1.5E-13$ uCi/ml

STS Consultants, Ltd.

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510

**FACSIMILE TRANSMISSION****Date:** September 16, 2003**To:** Verneta Simon/Fred Micke USEPA Fax #: 312-353-9178

Kara Hughes Lakeshore East, LLC Fax #: 312-642-2773

Sean Bezark Altheimer & Gray Fax #: 312-715-4800

Barbara Magel Karaganis, White & Magel Ltd. Fax #: 312-836-9083

Mark Krippel Kerr-McGee Chemical LLC Fax #: 630-231-3990

Pages being transmitted, incl. Cover: 10**CC:** **Fax No.:****From:** Steve Komder **Phone:** 847-279-2500**Re:** Lakeshore East, 221 N. Columbus Dr., Chicago, IL☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow**Message:**

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**STS CONSULTANTS**STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061-3159voice 847-279-2500
fax 847-279-2510
web www.stsconsultants.com

September 16, 2003

Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for August 2003, 221 N. Columbus Drive, Chicago, Illinois - STS Project
No. 1-32193-XC

Dear Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies the actions taken in August 2003 and activities planned for September 2003.

PROGRESS DURING AUGUST 2003

1. The periodic surveying of infrastructure installation activities (i.e., caissons, utility installations, etc.) for radiologically-impacted soil continues. On August 15, 2003, three areas with slightly elevated gamma reading were identified in the eastern portion of the former northern slip (see attached drawing). These areas were setup as exclusion zones 12C#1, 12C#2 and 12C#3. Equipment was mobilized to initiate the remedial activities on August 20, 2003. The remedial work was completed on August 25, 2003.
2. Table 1 below summarizes the quantity of radiologically-impacted material excavated in August and provides a cumulative total for the site. Verification surveys for the remediated exclusion zones were performed by the USEPA contractor on August 27 and notices of successful verification signed by the USEPA on August 29, 2003.

Table 1
Impacted Soil Loading Summary

Date	Containers Loaded - Weekly Totals	Cumulative Project Total
August 20 - 25, 2003	10	240

3. Personal and area air monitoring was conducted during the excavation of radiologically-impacted soil in August. No exceedances of the allowable limits for personal or area air monitoring were observed. Results for the air monitoring conducted during the week of August 18 are included within Attachment 1. It should be noted that the results for the August 25 monitoring were analyzed and indicated no exceedances, but were not tabulated at the time of this submission. These results will be submitted with the next monthly report.

PLANNED ACTIVITIES FOR AUGUST 2003

1. Gamma surveys will be conducted if infrastructure installation activities within the former slip areas are performed. The USEPA will be notified upon discovery of radiologically-impacted materials. Excavation activities will take place as necessary to remediate radiologically-impacted soil. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

US Environmental Protection Agency - Region 5
STS Project No. 1-32193-XC
September 16, 2003
Page 2

2. Monthly reports will continue to be submitted to the USEPA until submittal of the closure report.
3. The submittal of a revised draft closure report to the USEPA, which incorporates the comments of the client, is anticipated for September 2003.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.

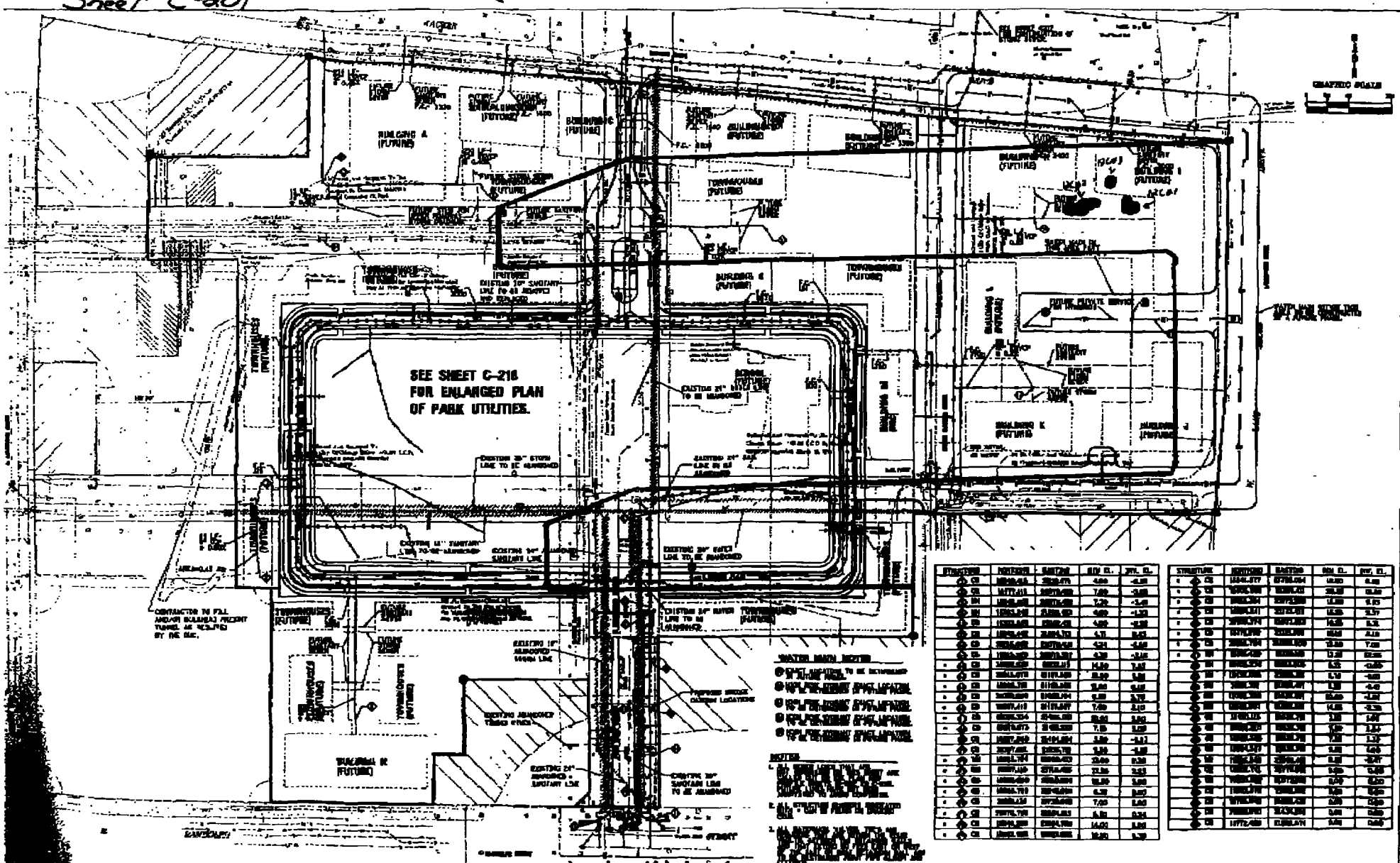


Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

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ATTACHMENT 1

Air Monitoring

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor

Report #31 8/18/03 - 8/22/03

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/18/03	0	0.00E+00	0.00E+00	
8/19/03	0	0.00E+00	0.00E+00	
8/20/03	355	0.00E+00	0.00E+00	
8/21/03	428	6.30E-16	2.70E-13	
8/22/03	304	0.00E+00	0.00E+00	
	1087	6.30E-16	2.70E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 2.48E-16 uCi/ml

Percentage of Release Limit of = 6.20%
4E-15uCi/ml**South Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/18/03	0	0.00E+00	0.00E+00	
8/19/03	0	0.00E+00	0.00E+00	
8/20/03	388	1.40E-15	5.17E-13	
8/21/03	444	0.00E+00	0.00E+00	
8/22/03	295	9.58E-16	2.82E-13	
	1108	2.36E-15	7.99E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 7.21E-16 uCi/ml

Percentage of Release Limit of = 18.02%
4E-15uCi/ml**East Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
8/18/03	0	0.00E+00	0.00E+00	
8/19/03	0	0.00E+00	0.00E+00	
8/20/03	342	0.00E+00	0.00E+00	
8/21/03	429	0.00E+00	0.00E+00	
8/22/03	305	0.00E+00	0.00E+00	
	1076	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration In uCi/ml	Concentration x Sample Min / Day	Comments
8/18/03	0	0.00E+00	0.00E+00	
8/19/03	0	0.00E+00	0.00E+00	
8/20/03	355	0.00E+00	0.00E+00	
8/21/03	445	0.00E+00	0.00E+00	
8/22/03	297	1.81E-15	5.38E-13	
	1097	1.81E-15	5.38E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (West) = 4.90E-16 uCi/ml****Percentage of Release Limit of = 12.25%**

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Report No. 31

August 18, 2003 - August 22, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/mi
							date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/mi	date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/mi	
N2059	8/20/03	8:32am	2:27pm	356	42	1.48E+07	8/21/03	82	13	2.3	5.61E-14	8/25/03	12	12	0	0.00E+00	0.00%
S2059	8/20/03	8:28am	2:35pm	369	47	1.72E+07	8/21/03	70	13	1.9	3.98E-14	8/25/03	14	12	0.067	1.40E-15	34.96%
E2059	8/20/03	8:40am	2:22pm	342	48	1.03E+07	8/21/03	73	13	2	4.43E-14	8/25/03	11	12	0	0.00E+00	0.00%
W2059	8/20/03	8:35am	2:30pm	355	50	1.76E+07	8/21/03	51	13	1.26667	2.80E-14	8/25/03	12	12	0	0.00E+00	0.00%
N2060	8/21/03	8:22am	3:30pm	428	45	1.91E+07	8/22/03	150	12	4.6	8.88E-14	8/26/03	14	13	0.033	6.38E-16	15.74%
S2060	8/21/03	8:15am	3:39pm	444	40	1.78E+07	8/22/03	112	12	3.33333	6.83E-14	8/26/03	10	13	0	0.00E+00	0.00%
E2060	8/21/03	8:21am	3:30pm	429	41	1.74E+07	8/22/03	116	12	3.46667	7.17E-14	8/26/03	13	13	0	0.00E+00	0.00%
W2060	8/21/03	8:12am	3:37pm	445	42	1.85E+07	8/22/03	143	12	4.36667	8.50E-14	8/26/03	11	13	0	0.00E+00	0.00%
N2061	8/22/03	8:06am	1:10pm	304	42	1.27E+07	8/25/03	16	12	0.13333	3.80E-15	8/27/03	10	11	0	0.00E+00	0.00%
S2061	8/22/03	8:11am	1:06pm	295	43	1.28E+07	8/25/03	14	12	0.08667	1.91E-15	8/27/03	12	11	0.033	9.56E-16	23.90%
E2061	8/22/03	8:06am	1:13pm	305	42	1.27E+07	8/25/03	16	12	0.2	5.68E-15	8/27/03	10	11	0	0.00E+00	0.00%
W2061	8/22/03	8:12am	1:09pm	287	45	1.32E+07	8/25/03	13	12	0.03333	8.07E-16	8/27/03	13	11	0.067	1.81E-15	45.36%
<p>Wednesday 8/20/03 through Friday 8/22/03 were the only days during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days</p>																	

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Report No. 31 August 18 - August 22, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
8/20/03	Glenn Huber	PAM2253	002-574	2.5	367	917500	8/21/03	11	13	0.00	0.00E+00
8/20/03	Odell Morgan	PAM2254	006-234	2.5	367	917500	8/21/03	13	13	0.00	0.00E+00
8/21/03	Glenn Huber	PAM2255	002-574	2.5	412	1030080	8/22/03	18	12	0.20	4.90E-14*
8/21/03	Odell Morgan	PAM2256	006-234	2.5	412	1030080	8/22/03	14	12	0.07	1.63E-14*
8/22/03	Glenn Huber	PAM2257	002-574	2.5	242	605000	8/25/03	12	12	0.00	0.00E+00
8/22/03	Odell Morgan	PAM2258	006-234	2.5	242	605000	8/25/03	12	12	0.00	0.00E+00

Wednesday 8/20/03 through Friday 8/22/03 were the only days during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Report No. 31 August 18 - August 22, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
8/21/03	Glenn Huber	PAM2256	002-574	2.5	412	1030000	8/26/03	12	13	0.00	0.00E+00	0.00%
8/21/03	Odell Morgan	PAM2256	008-234	2.5	412	1030000	8/26/03	10	13	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

STS Consultants, Ltd.

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510

**FACSIMILE TRANSMISSION****Date:** September 16, 2003**To:** Verneta Simon/Fred Micke USEPA Fax #: 312-353-9176

Kara Hughes Lakeshore East, LLC Fax #: 312-642-2773

Sean Bezark Althelmer & Gray Fax #: 312-715-4800

Barbara Magel Karaganis, White & Magel Ltd. Fax #: 312-836-9083

Mark Krippel Kerr-McGee Chemical LLC Fax #: 630-231-3990

Pages being transmitted, incl. Cover: 3**CC:** **Fax No.:****From:** Steve Komder **Phone:** 847-279-2500**Re:** Lakeshore East, 221 N. Columbus Dr., Chicago, IL☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow**Message:**

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IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL (847) 279-2500 IMMEDIATELY

**STS CONSULTANTS**STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061-3153voice 847-279-2500
fax 847-279-2510
web www.stsconsultants.com

September 16, 2003

Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for July 2003, 221 N. Columbus Drive, Chicago, Illinois - STS Project
No. 1-32193-XC

Dear Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies the actions taken in July 2003 and activities planned or expected for the remainder of August 2003.

PROGRESS DURING JULY 2003

1. Surveying of infrastructure installation activities (wick drains, caissons, utility installations, etc.) for radiologically-impacted soil continues. On July 28 spoil material that exhibited a slightly elevated gamma reading (27,000 cpm versus background of 20,352 cpm) was identified during the installation of a wick drain within the former southern slip (see attached drawing). The soil, which was estimated to be less than 1 cubic ft., was bagged for disposal. Based on the absence of elevated reading at the surface, the planned placement of 17 ft. of additional fill soil over the area, the short distance to the watertable, the isolated nature of the impacted material (based on the survey of surrounding spoil piles) and difficulties in conducting excavation activities within the newly stalled wick drain field no further investigation was conducted at the wick drain location (refer to STS memo of September 12, 2003).
2. Personal and area air monitoring was conducted during the excavation of radiologically-impacted soil the in late June and first two days of July. Results for the air monitoring were included within the monthly report for June (STS, July 16, 2003). No exceedances of the allowable limits for personal or area air monitoring have been observed.
3. Table 1 below summarizes the quantity of radiologically-impacted material excavated in late June and early July and provides a cumulative total for the site. Verification surveys for the remediated exclusion zones were obtained from the USEPA on June 20 and July 8, 2003.

Table 1
Impacted Soil Loading Summary

Date	Containers Loaded - Weekly Totals	Cumulative Project Total
June 16 - July 2, 2003	8	230

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

US Environmental Protection Agency - Region 5
STS Project No. 1-32193-XC
September 16, 2003
Page 2

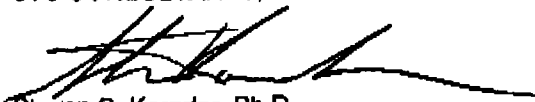
PLANNED ACTIVITIES FOR AUGUST 2003

1. Gamma surveys will be conducted during infrastructure installation activities within the former slip areas. Specifically, the installation of caissons in the former southern slip. The USEPA will be notified upon discovery of radiologically-impacted materials. Excavation activities will take place as necessary to remediate radiologically-impacted soil and the USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
2. Monthly reports will continue to be submitted to the USEPA until submittal of the closure report.
3. The submittal of a revised draft closure report to the USEPA, which incorporates the comments of the client, is anticipated for early September 2003.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.



Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

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STS Consultants, Ltd.

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510



I.1
7/16/03

FACSIMILE TRANSMISSION**Date:** July 16, 2003

To: Verneta Simor/Fred Micke	USEPA	Fax #: 312-353-9176
Kara Hughes	Lakeshore East, LLC	Fax #: 312-842-2773
Sean Bezark	Alzheimer & Gray	Fax #: 312-715-4800
Barbara Magel	Karaganis, White & Magel Ltd.	Fax #: 312-838-9083
Mark Krippel	Kerr-McGee Chemical LLC	Fax #: 630-231-3990

Pages being transmitted, incl. Cover: 22**CC:** **Fax No.:****From:** Steve Komder **Phone:** 847-279-2500**Re:** Lakeshore East, 221 N. Columbus Dr., Chicago, IL

☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow

Message:

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IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL (847) 279-2500 IMMEDIATELY



STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061-3153

voice 847-279-2500
fax 847-279-2510
web www.stsconsultants.com

July 16, 2003

Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3580

RE: Monthly Progress Report for June 2003, 221 N. Columbus Drive, Chicago, Illinois - STS Project
No. 1-32193-XC

Dear Ms. Simon and Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies the actions taken during June and early July 2003 and activities planned or expected for the remainder of July 2003.

PROGRESS DURING JUNE AND EARLY JULY 2003

1. Surveying of infrastructure installation activities for radiologically-impacted soil recommenced at the site on June 16, 2003. On June 17 an area that exhibited elevated gamma readings was identified during the installation of a sewer line in the former southern slip. The area was designated as exclusion zone C-218(73) (refer to drawing in Attachment A). Remediation of the area was performed on June 17 and 18, 2003.
2. Two areas with elevated gamma readings were discovered during the surveying of potential utility installation areas in the former northern slip the week of June 23. Two exclusion zones were designated C-201(31)#1 and C-201(31)#2 (refer to drawing in Attachment A). The areas were remediated between June 26 and July 2, 2003.
3. Personal and area air monitoring was conducted during the excavation of radiologically-impacted soil in June and early July. No exceedances of the allowable limits for personal or area air monitoring have been observed. Results for the air monitoring are included within Attachment B.
4. Table 1 below summarizes the quantity of radiologically-impacted material excavated during June and early July and provides a cumulative total for the site.

Table 1
Impacted Soil Loading Summary

Date	Containers Loaded - Weekly Totals	Cumulative Project Total
May 31, 2003		222
June 16 - July 2, 2003	8	230

5. Verification surveys for the remediated exclusion zones were completed by the USEPA on June 20 and July 8, 2003. The date the notice of successful verification was signed by the USEPA is provided in Table 2.

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

U.S. Environmental Protection Agency
STS Project No. 1-32193-XC
July 16, 2003
Page 2

Table 2
Notice of Successful Verification

Exclusion Zone ID	USEPA Signature Date
C-218(73)	6/20/03
C-201(31)#1	7/10/03
C-201(31)#2	7/10/03

PLANNED ACTIVITIES FOR JULY 2003

1. Gamma surveys will be conducted during infrastructure installation activities within the former slip areas. Specifically, the installation of caissons in the former southern slip is anticipated to begin in early July and take approximately three weeks. The USEPA will be notified upon discovery of radiologically-impacted materials. Excavation activities will take place as necessary to remediate radiologically-impacted soil discovered. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
2. Monthly reports will continue to be submitted to the USEPA until submittal of the closure report.
3. The submittal of a revised draft closure report to the USEPA, which incorporates the comments of the client, is anticipated for late July 2003.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.



Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

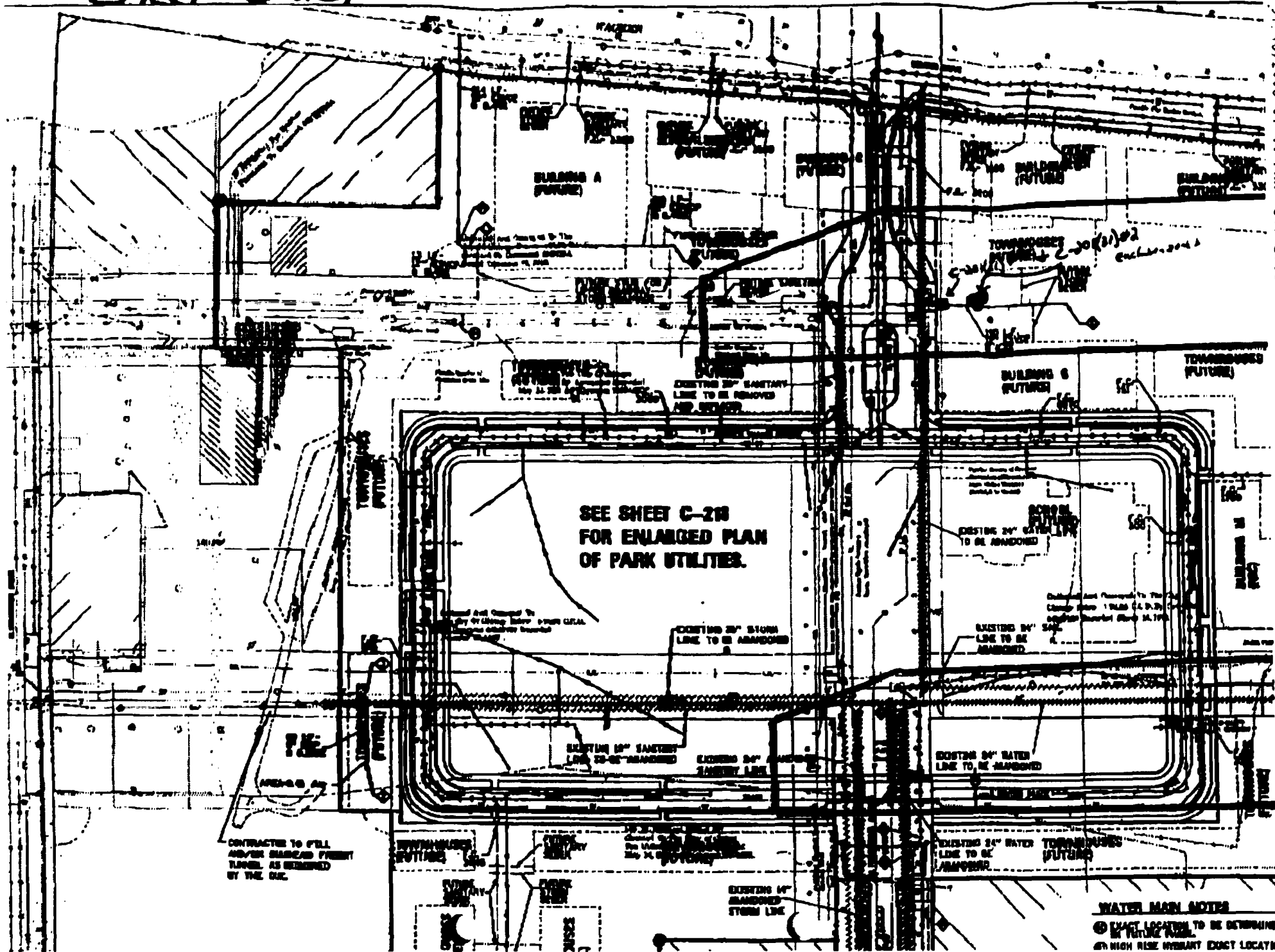
cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

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ATTACHMENT A

Exclusion Zone Location Drawings

Sheet C-201



WATER MAIN NOTES

- ① EXACT LOCATION TO BE DETERMINED BY FUTURE FIELD.
- ② HIGH RISE HYDRANT EXIST LOCATION.

ATTACHMENT B

April Air Monitoring Results

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor**Week #28 6/16/03 - 6/20/03****(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/16/03	0	0.00E+00	0.00E+00	
6/17/03	0	0.00E+00	0.00E+00	
6/18/03	281	9.47E-16	2.76E-13	
6/19/03	285	0.00E+00	0.00E+00	
6/20/03	0	0.00E+00	0.00E+00	
	566	9.47E-16	2.76E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (North) =****4.96E-16 uCi/ml****Percentage of Release Limit of =****12.39%****4E-15uCi/ml****South Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/16/03	0	0.00E+00	0.00E+00	
6/17/03	0	0.00E+00	0.00E+00	
6/18/03	310	0.00E+00	0.00E+00	
6/19/03	282	0.00E+00	0.00E+00	
6/20/03	0	0.00E+00	0.00E+00	
	572	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (South) =****0.00E+00 uCi/ml****Percentage of Release Limit of =****0.00%****4E-15uCi/ml****East Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/16/03	0	0.00E+00	0.00E+00	
6/17/03	8	0.00E+00	0.00E+00	
6/18/03	300	0.00E+00	0.00E+00	
6/19/03	288	0.00E+00	0.00E+00	
6/20/03	0	0.00E+00	0.00E+00	
	588	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (East) =****0.00E+00 uCi/ml****Percentage of Release Limit of =****0.00%****4E-15uCi/ml**

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/16/03	0	0.00E+00	0.00E+00	
6/17/03	0	0.00E+00	0.00E+00	
6/18/03	307	0.00E+00	0.00E+00	
6/19/03	263	0.00E+00	0.00E+00	
6/20/03	0	0.00E+00	0.00E+00	
	570	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%

Note: This is the first week of onsite soil excavation since April 11, 2003. Radiation monitoring of construction activities inside slip areas started on 6/16/03.

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Week 28

June 18, 2003 - June 20, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4,00E-15 uCi/ml
							date analyzed	gross counts	blg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	blg counts	net cpm	Concentration in uCi/ml	
N2052	6/18/03	8:47am	1:36pm	281	44	1.27E+07	6/18/03	80	12	2.20867	5.44E-14	6/23/03	14	13	0.003	5.47E-15	23.87%
S2052	6/18/03	8:40am	1:50pm	310	48	1.47E+07	6/18/03	73	12	2.03333	4.97E-14	6/23/03	11	13	0	0.00E+00	0.00%
E2052	6/18/03	8:50am	1:50pm	300	44	1.31E+07	6/18/03	58	12	1.63333	4.23E-14	6/23/03	13	13	0	0.00E+00	0.00%
W2052	6/18/03	8:38am	1:45pm	307	45	1.37E+07	6/18/03	79	12	2.23333	5.86E-14	6/23/03	12	13	0	0.00E+00	0.00%
N2053	6/18/03	8:14am	1:39pm	285	45	1.18E+07	6/20/03	49	11	1.26867	3.86E-14	6/24/03	11	13	0	0.00E+00	0.00%
S2053	6/18/03	8:10am	1:32pm	282	45	1.17E+07	6/20/03	58	11	1.88867	4.83E-14	6/24/03	13	13	0	0.00E+00	0.00%
E2053	6/18/03	8:12am	1:40pm	288	42	1.12E+07	6/20/03	36	11	0.63333	2.69E-14	6/24/03	12	13	0	0.00E+00	0.00%
W2053	6/18/03	8:07am	1:30pm	283	46	1.20E+07	6/20/03	40	11	0.88867	2.81E-14	6/24/03	12	13	0	0.00E+00	0.00%
<p>Note: There has been no onsite excavation of soil since April 11, 2003. Radiation monitoring of construction activities started on June 18, 2003.</p> <p>Wednesday 6/18/03 and Thursday 6/19/03 were the only days during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days</p>																	

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)**Week 28 June 16 - June 20, 2003****Lakeshore East Project - 221 North Columbus Drive, Chicago, IL******* All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)**

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
6/18/03	Odeh Morgan	PAM2238	006-234	2.5	310	775000	6/18/03	15	12	0.10	3.28E-14
6/18/03	Glenn Huber	PAM2240	002-574	2.5	310	775000	6/18/03	12	12	0.00	0.00E+00
6/19/03	Joel Ahweiler	PAM2241	006-234	2.5	422	1055000	6/20/03	10	11	0.00	0.00E+00
6/19/03	Odeh Morgan	PAM2242	002-574	2.5	424	1060000	6/20/03	11	11	0.00	0.00E+00

Note: There has been no onsite excavation of soil since April 11, 2003. Radiation monitoring of construction activities started on June 16, 2003.

Wednesday 6/18/03 and Thursday 6/19/03 were the only days during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.**See attached 4 Day Analysis Form for Occupational Dose Limit Information.**

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 28 June 16 - June 20, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Big Counts (30 min)	Net OPM	Sample Concentration (uCi/ml)	% of DAC
6/18/03	Odeh Morgan	PAM2236	008-234	2.8	310	778000	6/22/03	12	13	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = $5E-13$ uCi/mlAdministrative Site Limit for Occupational Exposure = 30% Th-232 DAC = $1.5E-13$ uCi/ml

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor**Week #29 6/23/03 - 6/27/03****(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/23/03	0	0.00E+00	0.00E+00	
6/24/03	0	0.00E+00	0.00E+00	
6/25/03	0	0.00E+00	0.00E+00	
6/26/03	152	0.00E+00	0.00E+00	
6/27/03	127	0.00E+00	0.00E+00	
	279	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (North) = 0.00E+00 uCi/ml****Percentage of Release Limit of = 0.00%****4E-15uCi/ml****South Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/23/03	0	0.00E+00	0.00E+00	
6/24/03	0	0.00E+00	0.00E+00	
6/25/03	0	0.00E+00	0.00E+00	
6/26/03	146	0.00E+00	0.00E+00	
6/27/03	131	1.97E-15	2.58E-13	
	277	1.97E-15	2.58E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (South) = 9.32E-16 uCi/ml****Percentage of Release Limit of = 23.29%****4E-15uCi/ml****East Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/23/03	0	0.00E+00	0.00E+00	
6/24/03	0	0.00E+00	0.00E+00	
6/25/03	0	0.00E+00	0.00E+00	
6/26/03	144	1.75E-15	2.52E-13	
6/27/03	123	0.00E+00	0.00E+00	
	267	1.75E-15	2.52E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly**Effluent Concentration (East) = 9.44E-16 uCi/ml****Percentage of Release Limit of = 23.60%****4E-15uCi/ml**

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
6/23/03	0	0.00E+00	0.00E+00	
6/24/03	0	0.00E+00	0.00E+00	
6/25/03	0	0.00E+00	0.00E+00	
6/26/03	150	0.00E+00	0.00E+00	
6/27/03	122	0.00E+00	0.00E+00	
	272	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum I_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) =

0.00E+00 uCi/ml

Percentage of Release Limit of =

0.00%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Week 29

June 23, 2003 - June 27, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bg counts	net cpm	Concentration in uCi/ml	
N2054	6/26/03	1:04pm	3:36pm	152	50	7.53E+06	6/27/03	23	11	0.4	1.91E-14	7/1/03	10	12	0	0.00E+00	0.00%
S2054	6/26/03	1:10pm	3:36pm	148	49	7.09E+06	6/27/03	20	11	0.3	1.59E-14	7/1/03	12	12	0	0.00E+00	0.00%
E2054	6/26/03	1:06pm	3:32pm	144	48	6.86E+06	6/27/03	28	11	0.5	2.63E-14	7/1/03	13	12	0.033	1.75E-15	43.88%
W2054	6/26/03	1:08pm	3:38pm	150	54	8.03E+06	6/27/03	18	11	0.23333	1.05E-14	7/1/03	9	12	0	0.00E+00	0.00%
N2055	6/27/03	12:12pm	2:19pm	127	46	5.79E+06	6/30/03	16	13	0.1	6.23E-15	7/2/03	10	12	0	0.00E+00	0.00%
S2055	6/27/03	12:10pm	2:21pm	131	47	6.10E+06	6/30/03	20	13	0.23333	1.38E-14	7/2/03	13	12	0.033	1.97E-15	49.23%
E2055	6/27/03	12:17pm	2:20pm	123	62	6.34E+06	6/30/03	17	13	0.13333	7.68E-15	7/2/03	12	12	0	0.00E+00	0.00%
W2055	6/27/03	12:16pm	2:17pm	122	51	6.17E+06	6/30/03	14	13	0.03333	1.86E-16	7/2/03	12	12	0	0.00E+00	0.00%
<p>Thursday 6/26/03 and Friday 6/27/03 were the only days during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days</p>																	

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)**Week 29 June 23 - June 27, 2003****Lakeshore East Project - 221 North Columbus Drive, Chicago, IL**

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Blk Counts (30 min)	Net CPM	Sample Concentration (uCi/hr)
6/26/03	Tim O'Brien	PAM2243	002-574	2.5	178	437500	6/27/03	11	11	0.00	0.00E+00
6/26/03	Odell Morgan	PAM2244	006-234	2.5	175	437500	6/27/03	10	11	0.00	0.00E+00
6/27/03	Odell Morgan	PAM2245	006-234	2.5	422	1055000	6/30/03	11	13	0.00	0.00E+00
6/27/03	Tim O'Brien	PAM2246	002-574	2.5	424	1060000	6/30/03	13	13	0.00	0.00E+00

Thursday 6/26/03 and Friday 6/27/03 were the only days during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)**Week 29 June 23 - June 27, 2003****Lakeshore East Project - 221 North Columbus Drive, Chicago, IL*******Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay**

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
No 4 day analysis of PAM's required for this monitoring period												

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent**2000 DAC-Hours = 5 rem****DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml****Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml**

JUL-14-2003 11:41

STS

847 279 2535 P.02/09

07/14/03 MON 09:57 FAX 815 485 4433

STAN HUBER CONSL

002

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeview East Project - 221 North Columbus Drive, Chicago, IL

North Monitor		Week 988 6/30/03 - 7/14/03		(High Volume)
Date	Time Sampled (minutes)	Effluent Concentration in $\mu\text{Ci}/\text{ml}$	Concentration x Sample Min / Day	Comments
6/30/03	211	0.00E+00	0.00E+00	
7/1/03	290	1.00E-15	5.00E-13	
7/2/03	220	0.00E+00	0.00E+00	
7/3/03	0	0.00E+00	0.00E+00	
7/4/03	0	0.00E+00	0.00E+00	
	820	1.00E-15	5.00E-13	

$$C_{\text{avg}} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

By A9 MURES 1400

Time Weighted Weekly

Effluent Concentration (North) =

6.70E-16 $\mu\text{Ci}/\text{ml}$

Percentage of Release Limit of =

16.00%

4E-15 $\mu\text{Ci}/\text{ml}$ **South Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in $\mu\text{Ci}/\text{ml}$	Concentration x Sample Min / Day	Comments
6/30/03	212	0.00E+00	0.00E+00	
7/1/03	302	0.00E+00	0.00E+00	
7/2/03	320	1.00E-15	6.00E-13	
7/3/03	0	0.00E+00	0.00E+00	
7/4/03	0	0.00E+00	0.00E+00	
	843	1.00E-15	6.00E-13	

$$C_{\text{avg}} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

By A9 MURES 1400

Time Weighted Weekly

Effluent Concentration (South) =

7.10E-16 $\mu\text{Ci}/\text{ml}$

Percentage of Release Limit of =

17.50%

4E-15 $\mu\text{Ci}/\text{ml}$ **East Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in $\mu\text{Ci}/\text{ml}$	Concentration x Sample Min / Day	Comments
6/30/03	200	1.10E-15	2.40E-13	
7/1/03	270	0.00E+00	0.00E+00	
7/2/03	322	0.00E+00	0.00E+00	
7/3/03	0	0.00E+00	0.00E+00	
7/4/03	0	0.00E+00	0.00E+00	
	892	1.10E-15	2.40E-13	

$$C_{\text{avg}} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

By A9 MURES 1400

Time Weighted Weekly

Effluent Concentration (East) =

3.00E-16 $\mu\text{Ci}/\text{ml}$

Percentage of Release Limit of =

7.50%

4E-15 $\mu\text{Ci}/\text{ml}$

JUL-14-2003 11:41

STS

847 279 2535 P.03/09

07/14/03 MON 09:57 FAX 815 485 4433

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0003

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in $\mu\text{Ci/ml}$	Concentration x Sample Min / Day	Comments
6/30/03	208	0.00E+00	0.00E+00	
7/1/03	266	0.00E+00	0.00E+00	
7/2/03	320	8.24E-16	2.64E-13	
7/3/03	0	0.00E+00	0.00E+00	
7/4/03	0	0.00E+00	0.00E+00	
	821	8.24E-16	2.64E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 MURS0 1400

Time Weighted Weekly

Effluent Concentration (Week) = 3.21E-16 $\mu\text{Ci/ml}$

Percentage of Release Limit of = 8.03%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis) Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Week 30 June 30, 2003 - July 4, 2003

Sample ID	date sampled	start time	stop time	total time sampled	total flow (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4005-05 uCi/ml
							date analyzed	gross counts	lig counts	net cps	Concentration in uCi/ml	date analyzed	gross counts	lig counts	net cps	Concentration in uCi/ml	
W2058	6/30/03	8:51am	1:22pm	219	80	1.00E+07	7/1/03	48	12	0.2	8.90E-15	7/7/03	11	13	0	0.00E+00	0.00%
W2056	6/30/03	8:58am	1:27pm	212	82	1.88E+07	7/1/03	28	12	8.88E-7	1.87E-14	7/7/03	12	13	0	0.00E+00	0.00%
W2055	6/30/03	8:52am	1:20pm	208	48	1.81E+07	7/1/03	27	12	8.5	1.78E-14	7/7/03	14	13	0.053	1.18E-15	29.74%
W2058	6/30/03	8:58am	1:24pm	208	48	1.00E+07	7/1/03	21	12	8.9	1.08E-14	7/7/03	18	18	0	0.00E+00	0.00%
W2057	7/1/03	8:07am	1:08pm	288	43	1.27E+07	7/2/03	74	12	2.08E-7	5.65E-14	7/7/03	16	13	0.087	1.88E-15	47.18%
W2057	7/1/03	8:02am	1:04pm	302	48	1.38E+07	7/2/03	88	12	1.88E-7	4.18E-14	7/7/03	13	13	0	0.00E+00	0.00%
W2057	7/1/03	8:11am	12:50pm	278	41	1.13E+07	7/2/03	42	12	1	3.18E-14	7/7/03	11	13	0	0.00E+00	0.00%
W2057	7/1/03	8:07am	1:02pm	288	48	1.32E+07	7/2/03	83	12	1.38E-7	3.74E-14	7/7/03	19	13	0	0.00E+00	0.00%
W2058	7/2/03	7:58am	1:35pm	328	42	1.38E+07	7/8/03	44	13	1.03E-7	2.78E-14	7/7/03	12	13	0	0.00E+00	0.00%
W2058	7/2/03	7:58am	1:27pm	328	40	1.30E+07	7/8/03	22	18	0.3	8.28E-15	7/7/03	15	13	0.057	1.64E-15	48.07%
W2058	7/2/03	8:00am	1:22pm	322	42	1.34E+07	7/3/03	28	18	0.53E-7	1.43E-14	7/7/03	12	13	0	0.00E+00	0.00%
W2058	7/2/03	8:04am	1:24pm	320	48	1.48E+07	7/3/03	34	13	0.7	1.73E-14	7/7/03	14	13	0.833	8.24E-15	20.89%

Monday 6/30/03 through Wednesday 7/2/03 were the only days during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days.

* 4-day analysis of 6/30/03 samples were not analyzed until 7/7/03 due to 4th of July holiday

Personal Air Monitoring Summary Sheet (PAM's - Daily Analysis)

Week 30 June 30 - July 4, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
6/30/03	Odell Morgan	PAM2247	002-574	2.5	355	887500	7/1/03	10	12	0.00	0.00E+00
6/30/03	Tim O'Brien	PAM2248	006-234	2.5	355	887500	7/1/03	11	12	0.00	0.00E+00
7/1/03	Odell Morgan	PAM2249	006-234	2.5	290	725000	7/2/03	20	12	0.27	9.28E-14
7/1/03	Tim O'Brien	PAM2250	002-574	2.5	290	725000	7/2/03	14	12	0.07	2.32E-14
7/2/03	Odell Morgan	PAM2251	002-574	2.5	388	970000	7/3/03	13	13	0.00	0.00E+00
7/2/03	Tim O'Brien	PAM2252	006-234	2.5	388	970000	7/3/03	16	13	0.10	2.80E-14

Monday 6/30/03 through Wednesday 7/2/03 were the only days during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 30 June 30 - July 4, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

**Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
7/1/03	Odel Morgan	PAM2249	006-234	2.5	280	725000	7/7/03	12	13	0.00	0.00E+00	0.00%
7/1/03	Tim O'Brien	PAM2250	002-574	2.5	290	725000	7/7/03	13	13	0.00	0.00E+00	0.00%
7/2/03	Tim O'Brien	PAM2252	006-234	2.5	388	970000	7/7/03	11	13	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml



STS CONSULTANTS

STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061-3153

6/23/03 I.1
voice 847-279-2500
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web www.stsconsultants.com

June 23, 2003

Ms. Verneta Simon, On-Scene Coordinator
Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for May 2003, 221 N. Columbus Drive, Chicago, Illinois
STS Project No. 1-32193-XC

Dear Ms. Simon and Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies actions taken during May 2003 and activities planned or expected during May 2003.

PROGRESS DURING MAY 2003

1. No excavation or remediation activities were conducted that required surveying for the detection of radiologically-impacted soils.
2. A draft of the closure report was completed and submitted to the client for review in late May.

PLANNED ACTIVITIES FOR JUNE 2003

1. It is anticipated that infrastructure and construction activities will resume in mid-June. Gamma surveys will continue to be conducted on a periodic basis as infrastructure or construction related activities occur within the former slip areas. The USEPA will be notified upon discovery of radiologically-impacted materials. Excavation activities will take place as necessary to remediate radiologically-impacted soil discovered and the USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
2. Monthly reports will continue to be submitted to the USEPA until submittal of the closure report.
3. The submittal of a revised draft closure report to the USEPA, which incorporates the comments of the client, is anticipated for late June or early July 2003.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.

Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

U.S. Environmental Protection Agency
STS Project No. 1-32193-XC
June 23, 2003
Page 2

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

May 13, 2003

Ms. Verneta Simon, On-Scene Coordinator
Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for April 2003, 221 N. Columbus Drive, Chicago, Illinois - STS Project
No. 1-32193-XC

Dear Ms. Simon and Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies actions taken during April 2003 and activities planned or expected during May 2003.

PROGRESS DURING APRIL 2003

1. Infrastructure related remedial activities commenced at the site on March 10 and continued through April 11, 2003. Remediation involved the excavation of soil within the former northern slip area, primarily grids 9 through 11, to establish the base grade necessary for roadway development (refer to attached Figure). Area air monitoring and personal monitoring were conducted during these remediation activities.
2. In early April personal and area air monitoring was conducted during the excavation and/or handling of radiologically-impacted soil in accordance with the approval issued by the USEPA on December 13, 2002. No exceedances of the allowable limits for personal or area air monitoring have been observed. Results for the air monitoring conducted during April are included within Attachment 1.
3. Table 1 below summarizes the quantity of radiologically-impacted material excavated during April and provides a cumulative total for the site.

Table 1
Impacted Soil Loading Summary

Date	Containers Loaded - Weekly Totals	Cumulative Project Total
As of March 31, 2003		205
April 1-10, 2003	17	222

4. Verification surveys for infrastructure remedial activities were completed by the USEPA on April 4 and 11, 2003. The grid location and date the notice of successful verification was signed by the USEPA are provided in Table 2. For notation purposes each grid was divided into four quadrants denoted with letters starting with the northwest corner (A) and proceeding in a clockwise direction (i.e., 9A, 9B, 9C and 9D).

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

Table 2
Notice of Successful Verification

Survey Grid Designations	USEPA Signature Date
9A#1, 9A#2 and 9B36A	4/2/2003
9D/9C NE, 9D/9C SE, 9D/9C NW, 9D/9C SW and 10D#2	4/15/2003
11C#1, 11C#2, 11D, 10C, 10D#1, 9C and 0D#3	4/16/2003

5. A 500 gallon underground storage tank (UST) was discovered during the infrastructure remedial activities on April 3, 2003. The UST was removed on Friday April 18, 2003 in accordance with IEPA regulations. No evidence of a petroleum impact in the soil beneath the tank was noted. The UST site showed no indications of radiological impacts.


PLANNED ACTIVITIES FOR MAY 2003

1. Gamma surveys will continue to be conducted on a periodic basis as infrastructure or construction related activities occur within the former slip areas. The USEPA will be notified upon discovery of radiologically-impacted materials. Excavation activities will take place as necessary to remediate radiologically-impacted soil discovered and the USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
2. Monthly reports will continue to be submitted to the USEPA until submittal of the closure report.
3. Preparation of the closure report continues with submittal of a draft anticipated in May 2003.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.



Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

ATTACHMENT A

April Air Monitoring Results

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor

Week #26 3/31/03-4/4/03

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/31/03	459	6.44E-16	2.96E-13	
4/1/03	422	0.00E+00	0.00E+00	
4/2/03	427	6.04E-16	2.58E-13	
4/3/03	406	2.30E-15	9.34E-13	
4/4/03	0	0.00E+00	0.00E+00	No Field Work on 4/4/03 - Rained Out
1714		3.55E-15	1.49E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 8.68E-16 uCi/ml

Percentage of Release Limit of = 21.69%

4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/31/03	459	0.00E+00	0.00E+00	
4/1/03	422	1.34E-15	5.65E-13	
4/2/03	427	0.00E+00	0.00E+00	
4/3/03	408	0.00E+00	0.00E+00	
4/4/03	0	0.00E+00	0.00E+00	No Field Work on 4/4/03 - Rained Out
1716		1.34E-15	5.65E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 3.30E-16 uCi/ml

Percentage of Release Limit of = 8.24%

4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/31/03	455	0.00E+00	0.00E+00	
4/1/03	420	6.71E-16	2.82E-13	
4/2/03	429	7.44E-16	3.19E-13	
4/3/03	415	6.22E-16	2.58E-13	
4/4/03	0	0.00E+00	0.00E+00	No Field Work on 4/4/03 - Rained Out
1719		2.04E-15	8.59E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 5.00E-16 uCi/ml

Percentage of Release Limit of = 12.49%

4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCl/ml	Concentration x Sample Min / Day	Comments
3/31/03	455	0.00E+00	0.00E+00	
4/1/03	420	0.00E+00	0.00E+00	
4/2/03	434	0.00E+00	0.00E+00	
4/3/03	410	0.00E+00	0.00E+00	
4/4/03	0	0.00E+00	0.00E+00	No Field Work on 4/4/03 - Rained Out
	1719	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly	
Effluent Concentration (West) =	0.00E+00 uCl/ml
Percentage of Release Limit of =	0.00%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Week 26

March 31, 2003 - April 4, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N2047	3/31/03	8:09am	3:48pm	459	41	1.87E+07	4/1/03	58	12	1.53333	2.96E-14	4/4/03	13	12	0.033	6.44E-16	16.11%
S2047	3/31/03	8:16am	3:55pm	459	45	2.05E+07	4/1/03	64	12	1.73333	3.05E-14	4/4/03	12	12	0	0.00E+00	0.00%
E2047	3/31/03	8:10am	3:45pm	455	47	2.12E+07	4/1/03	71	12	1.96667	3.35E-14	4/4/03	10	12	0	0.00E+00	0.00%
W2047	3/31/03	8:15am	3:50pm	455	52	2.34E+07	4/1/03	66	12	1.8	2.77E-14	4/4/03	12	12	0	0.00E+00	0.00%
N2048	4/1/03	8:25am	3:27pm	422	47	1.97E+07	4/2/03	481	11	15.6667	2.87E-13	4/7/03	10	12	0	0.00E+00	0.00%
S2048	4/1/03	8:23am	3:25pm	422	43	1.80E+07	4/2/03	426	11	13.8333	2.77E-13	4/7/03	14	12	0.067	1.34E-15	33.41%
E2048	4/1/03	8:25am	3:25pm	420	43	1.79E+07	4/2/03	439	11	14.2667	2.87E-13	4/7/03	13	12	0.033	6.71E-16	16.78%
W2048	4/1/03	8:21am	3:21pm	420	42	1.75E+07	4/2/03	455	11	14.8	3.05E-13	4/7/03	11	12	0	0.00E+00	0.00%
N2049	4/2/03	8:18am	3:25pm	427	47	1.99E+07	4/3/03	58	10	1.8	2.90E-14	4/7/03	13	12	0.033	6.04E-16	15.10%
S2049	4/2/03	8:21am	3:28pm	427	42	1.78E+07	4/3/03	61	10	1.7	3.45E-14	4/7/03	10	12	0	0.00E+00	0.00%
E2049	4/2/03	8:20am	3:29pm	429	38	1.62E+07	4/3/03	67	10	1.9	4.24E-14	4/7/03	13	12	0.033	7.44E-16	18.59%
W2049	4/2/03	8:17am	3:31pm	434	41	1.76E+07	4/3/03	50	10	1.33333	2.73E-14	4/7/03	12	12	0	0.00E+00	0.00%
N2050	4/3/03	8:42am	3:38pm	406	39	1.57E+07	4/4/03	70	12	1.93333	4.44E-14	4/10/03	16	13	0.1	2.30E-15	57.43%
S2050	4/3/03	8:34am	3:22pm	408	45	1.82E+07	4/4/03	112	12	3.33333	6.60E-14	4/10/03	13	13	0	0.00E+00	0.00%
E2050	4/3/03	8:36am	3:31pm	415	47	1.93E+07	4/4/03	158	12	4.86667	9.08E-14	4/10/03	14	13	0.033	6.22E-16	15.54%
W2050	4/3/03	8:40am	3:30pm	410	47	1.91E+07	4/4/03	131	12	3.96667	7.49E-14	4/10/03	11	13	0	0.00E+00	0.00%
No Field Work on 4/4/03 - Rained Out																	

* 4 day analysis of air samples collected on 4/3/03 (2050) were not analyzed until 4/10/03 because we did not work on 4/8/03 and 4/9/03

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor

Week #27 4/7/03-4/11/03

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
4/7/03	0	0.00E+00	0.00E+00	
4/8/03	0	0.00E+00	0.00E+00	
4/9/03	0	0.00E+00	0.00E+00	
4/10/03	404	0.00E+00	0.00E+00	
4/11/03	0	0.00E+00	0.00E+00	
	404	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
4/7/03	0	0.00E+00	0.00E+00	
4/8/03	0	0.00E+00	0.00E+00	
4/9/03	0	0.00E+00	0.00E+00	
4/10/03	0	0.00E+00	0.00E+00	No sample collected today-equipment
4/11/03	0	0.00E+00	0.00E+00	
	0	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = #DIV/0! uCi/ml

Percentage of Release Limit of = #DIV/0!
4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
4/7/03	0	0.00E+00	0.00E+00	
4/8/03	0	0.00E+00	0.00E+00	
4/9/03	0	0.00E+00	0.00E+00	
4/10/03	406	0.00E+00	0.00E+00	
4/11/03	0	0.00E+00	0.00E+00	
	406	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
4/7/03	0	0.00E+00	0.00E+00	
4/8/03	0	0.00E+00	0.00E+00	
4/9/03	0	0.00E+00	0.00E+00	
4/10/03	406	0.00E+00	0.00E+00	
4/11/03	0	0.00E+00	0.00E+00	
	406	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

April 7, 2003 - April 11, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/ min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	bkg counts	net cpm	Concentration in uCi/ml	
N2051	4/10/03	8:04am	2:48pm	404	48	1.92E+07	4/11/03	21	11	0.33333	6.25E-15	4/15/03	11	13	0	0.00E+00	0.00%
S2051	4/10/03 No sample collected - see note below																0.00%
E2051	4/10/03	8:04am	2:50pm	406	52	2.09E+07	4/11/03	23	11	0.4	6.89E-15	4/15/03	13	13	0	0.00E+00	0.00%
W2051	4/10/03	8:02am	2:48pm	406	38	1.53E+07	4/11/03	18	11	0.23333	5.50E-15	4/15/03	10	13	0	0.00E+00	0.00%
<p>Thursday April 10 was the only day during this week when thorium contaminated material was excavated and loaded. No South Monitor sample was taken on this day, because monitor was non-operational.</p>																	

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 26 March 31 - April 4, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
4/10/03	Jerry Krane	PAM2237	006-234	2.5	370	925000	4/11/03	9	11	0.00	0.00E+00
4/10/03	Odell Morgan	PAM2238	002-766	2.5	555	1387500	4/11/03	11	11	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 27 April 7 - April 11, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
No 4 day analysis of PAM's required for this monitoring period												

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

STS Consultants, Ltd.

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510

4 110103
IN**FACSIMILE TRANSMISSION****Date:** April 16, 2003**To:** Verneta Simon/Fred Micke USEPA Fax #: 312-353-9176

Kara Hughes Lakeshore East, LLC Fax #: 312-642-2773

Sean Bezark Altheimer & Gray Fax #: 312-715-4800

Barbara Magel Karaganis, White & Magel Ltd. Fax #: 312-836-9083

Mark Krippel Kerr-McGee Chemical LLC Fax #: 630-231-3990

Pages being transmitted, incl. Cover: 26**CC:** **Fax No.:****From:** Steve Kornder **Phone:** 847-279-2500**Re:** Lakeshore East, 221 N. Columbus Dr., Chicago, IL☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow**Message:**

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**STS CONSULTANTS**STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061-3153voice 847-279-2500
fax 847-279-2510
web www.stsconsultants.com

April 16, 2003

Ms. Vemeta Simon, On-Scene Coordinator
Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for March 2003, 221 N. Columbus Drive, Chicago, Illinois - STS
Project No. 1-32193-XC

Dear Ms. Simon and Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies actions taken during March 2003 and activities planned or expected during April 2003.

PROGRESS DURING MARCH 2003

1. The grading phase (lift) surveys of historical fill (Phase III) were completed on March 7, 2003. A letter was submitted to the USEPA, which indicated that the Phase II (remediation of identified radiologically-impacted materials) and Phase III (lift survey) activities were complete. The letter requested that the USEPA approve the initiation of the closure report activities. A letter from the USEPA dated March 19, 2003 provided draft wording. A response to the USEPA's letter was sent April 7, 2003.
2. Construction/infrastructure related activities commenced on March 10, 2003 following the completion of the lift survey phase (Phase III). Initial activities involved the excavation of soil within the former northern slip area to establish the grades necessary for future roadway/infrastructure development. The excavation focused primarily on the former northern slip in grid areas 9 through 11 (refer to attached Figure). Excavations proceeded in lifts and were surveyed for elevated gamma radiation as the excavation proceeded. Personal air monitoring was performed on personnel performing the gamma radiation surveys.
3. The USEPA was notified via telephone on March 11, 2003 of the initial discovery of elevated gamma reading during the infrastructure excavation in the former northern slip area (grid 9). Areas with elevated gamma readings were designated as exclusion zones and will be managed according to procedures outlined in the site Work Plan.
4. During infrastructure related activities a test pit was excavated in grid 36 on March 24, 2003. A gamma radiation survey conducted during the excavation observed elevated gamma readings. The area was designated as an exclusion zone.
5. Excavation of radiologically-impacted soil was initiated the week of March 24, 2003. Areas of excavation included the identified exclusion zones in the grids 9 and 36. Area air monitoring and personal monitoring were conducted during the remediation activities.
6. Table 2 below summarizes the quantity of radiologically-impacted material excavated during March and provides a cumulative total for the project.

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

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Table 2
Impacted Soil Loading Summary

Date	Containers Loaded - Weekly Totals	Cumulative Project Total
As of February 28, 2003		176
March 3-7	1	177
March 10-14	0	177
March 17-21	0	177
March 24-28	24	201
March 31	4	205

7. Verification surveys were completed by the USEPA in four areas on March 27, 2003. The grid location and date the notice of successful verification was signed by the USEPA are provided in Table 2. Please note that for notation purposes each grid is divided into four quadrants denoted with letters starting with the northwest corner (A) and proceeding in a clockwise direction (i.e., 9A, 9B, 9C and 9D).

Table 1
Notice of Successful Verification

Survey Grid Designation	USEPA Signature Date
9A#1	4/2/03
9A#2	4/2/03
9B	4/2/03
36A	4/2/03

8. Personal and area air monitoring was conducted during the excavation and/or handling of radiologically-impacted soil in accordance with the approval issued by the USEPA on December 13, 2002. As approved by the USEPA, monitoring during survey activities was limited to personal air monitoring. No exceedances of the allowable limits for personal or area air monitoring have been observed. Results for the air monitoring conducted during March are included within Attachment 1.

PLANNED ACTIVITIES FOR APRIL 2003

1. The isolated areas of radiologically-impacted material identified during the infrastructure excavations in the former northern slip will be excavated. The USEPA will be requested to survey the areas and sign-off that each area has successfully remediated.
2. In accordance with the Work Plan approval issued by the USEPA on December 13, 2002, area air monitoring will only be conducted at the site during excavation or handling of radiologically-impacted soils. Personal air monitoring will be performed during excavation activities or test pit investigations conducted within the former slip areas.
3. Gamma surveys will continue to be periodically conducted during infrastructure and construction related activities within the former slip areas. The areas will be surveyed for elevated gamma radiation as the activities proceed. The USEPA will be notified upon discovery of radiologically-impacted materials. Excavation activities will take place as necessary to remediate radiologically-impacted soil discovered during the infrastructure/construction related activities. The USEPA will be

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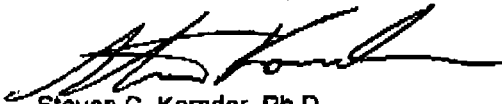
requested to conduct verification surveys and sign-off that the areas have been successfully remediated.

4. In accordance with Work Plan the fill soils imported to the site will be tested for total radium at least once per 10,000 cubic yards for each borrow source.
5. Monthly reports will continue to be submitted to the USEPA until submittal of the closure report. We request receipt of written authorization providing your concurrence.
6. Preparation of the closure report will continue. Submittal of a draft is anticipated in May 2003.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.



Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

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ATTACHMENT A

March Air Monitoring Results

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor**Week #25 3/24/03-3/28/03****(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/24/03	462	0.00E+00	0.00E+00	
3/25/03	383	1.71E-15	6.55E-13	
3/26/03	458	6.48E-16	2.98E-13	
3/27/03	433	0.00E+00	0.00E+00	
3/28/03	399	0.00E+00	0.00E+00	
	2135	2.36E-15	9.51E-13	

$$C_{eq} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 MUREG 1400

Time Weighted Weekly**Effluent Concentration (North) = 4.46E-16 uCi/ml****Percentage of Release Limit of = 11.13%**
4E-15uCi/ml**South Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/24/03	472	0.00E+00	0.00E+00	
3/25/03	383	0.00E+00	0.00E+00	
3/26/03	458	1.89E-15	8.66E-13	
3/27/03	433	0.00E+00	0.00E+00	
3/28/03	394	0.00E+00	0.00E+00	
	2140	1.89E-15	8.66E-13	

$$C_{eq} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 MUREG 1400

Time Weighted Weekly**Effluent Concentration (South) = 4.04E-16 uCi/ml****Percentage of Release Limit of = 10.11%**
4E-15uCi/ml**East Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/24/03	463	5.82E-16	2.69E-13	
3/25/03	383	0.00E+00	0.00E+00	
3/26/03	458	0.00E+00	0.00E+00	
3/27/03	439	1.79E-15	7.56E-13	
3/28/03	396	1.49E-15	5.90E-13	
	2139	3.80E-15	1.62E-12	

$$C_{eq} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 MUREG 1400

Time Weighted Weekly**Effluent Concentration (East) = 7.57E-16 uCi/ml****Percentage of Release Limit of = 18.92%**
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/24/03	464	1.05E-15	4.87E-13	
3/25/03	380	2.13E-15	8.09E-13	
3/26/03	460	0.00E+00	0.00E+00	
3/27/03	436	0.00E+00	0.00E+00	
3/28/03	399	6.00E-16	3.19E-13	
	2139	3.88E-15	1.62E-12	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = **7.58E-16 uCi/ml**
 Percentage of Release Limit of = **18.69%**

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 25 March 24 - March 28, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
3/24/03	Jerry Krane	PAM2211	006-234	2.5	551	1377500	3/25/03	32	12	0.67	1.22E-13*
3/24/03	Odell Morgan	PAM2212	002-574	2.5	552	1380000	3/25/03	27	12	0.50	9.14E-14*
3/24/03	Lindsay Aschim	PAM2213	002-766	2.5	550	1375000	3/25/03	40	12	0.93	1.71E-13*
3/25/03	Lindsay Aschim	PAM2214	006-234	2.5	403	1007500	3/26/03	18	13	0.17	4.17E-14*
3/25/03	Odell Morgan	PAM2215	002-766	2.5	515	1267500	3/26/03	12	13	0.00	0.00E+00
3/25/03	Tim O'Brien	PAM2216	002-574	2.5	516	1290000	3/26/03	13	13	0.00	0.00E+00
3/26/03	Odell Morgan	PAM2217	002-574	2.5	491	1227500	3/27/03	14	11	0.10	2.06E-14*
3/26/03	Lindsay Aschim	PAM2218	002-766	2.5	493	1232500	3/27/03	18	11	0.23	4.76E-14*
3/26/03	Jerry Krane	PAM2219	006-234	2.5	490	1225000	3/27/03	17	11	0.20	4.12E-14*
3/27/03	Lindsay Aschim	PAM2220	006-234	2.5	527	1317500	3/28/03	12	13	0.00	0.00E+00
3/27/03	Tim O'Brien	PAM2221	002-766	2.5	529	1322500	3/28/03	15	13	0.07	1.27E-14*
3/27/03	Armando Ruiz	PAM2222	002-574	2.5	526	1315000	3/28/03	13	13	0.00	0.00E+00
3/28/03	Tim O'Brien	PAM2223	002-574	2.5	483	1157500	3/31/03	10	12	0.00	0.00E+00
3/28/03	Lindsay Aschim	PAM2224	006-234	2.5	483	1157500	3/31/03	12	12	0.00	0.00E+00
3/28/03	Odell Morgan	PAM2225	002-766	2.5	496	1240000	3/31/03	11	12	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Week 25

March 24, 2003 - March 28, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis				Concentration in uCi/ml	four day analysis				Concentration in uCi/ml	% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	bg counts	net cpm		date analyzed	gross counts	bg counts	net cpm		
N2042	3/24/03	7:53am	3:35pm	462	36	1.00E+07	3/25/03	128	12	3.00067	8.70E-14	3/28/03	12	13	0	0.00E+00	0.00%
E2042	3/24/03	7:47am	3:38pm	472	47	2.20E+07	3/25/03	103	12	3.03333	4.97E-14	3/28/03	12	13	0	0.00E+00	0.00%
E2042	3/24/03	7:52am	3:35pm	463	46	2.00E+07	3/25/03	139	12	4.23333	7.30E-14	3/28/03	14	13	0.033	6.82E-16	14.55%
W2042	3/24/03	7:56am	3:38pm	464	50	2.30E+07	3/25/03	148	12	4.63333	7.11E-14	3/28/03	15	13	0.067	1.06E-15	26.13%
N2043	3/25/03	7:36am	2:01pm	383	37	1.40E+07	3/26/03	44	13	1.03333	2.05E-14	3/31/03	14	12	0.067	1.71E-15	42.78%
E2043	3/25/03	7:42am	2:05pm	383	60	1.90E+07	3/26/03	71	13	1.03333	3.07E-14	3/31/03	11	12	0	0.00E+00	0.00%
E2043	3/25/03	7:44am	2:07pm	383	30	1.14E+07	3/26/03	48	13	1.16667	3.69E-14	3/31/03	12	12	0	0.00E+00	0.00%
W2043	3/25/03	7:40am	2:00pm	380	46	1.00E+07	3/26/03	64	13	1.36667	2.01E-14	3/31/03	15	12	0.1	2.13E-15	53.18%
N2044	3/26/03	7:40am	3:18pm	458	41	1.00E+07	3/27/03	68	11	1.56667	3.03E-14	3/31/03	13	12	0.033	6.46E-16	16.14%
E2044	3/26/03	7:37am	3:15pm	458	42	1.01E+07	3/27/03	103	11	3.06667	5.00E-14	3/31/03	15	12	0.1	1.89E-15	47.28%
E2044	3/26/03	7:42am	3:20pm	458	40	1.02E+07	3/27/03	86	11	2.5	4.00E-14	3/31/03	10	12	0	0.00E+00	0.00%
W2044	3/26/03	7:35am	3:15pm	460	44	2.01E+07	3/27/03	88	11	2.8	4.67E-14	3/31/03	12	12	0	0.00E+00	0.00%
N2045	3/27/03	7:54am	3:07pm	433	36	1.50E+07	3/28/03	64	13	1.7	4.08E-14	4/1/03	10	12	0	0.00E+00	0.00%
E2045	3/27/03	7:57am	3:10pm	433	42	1.80E+07	3/28/03	97	13	2.8	6.00E-14	4/1/03	11	12	0	0.00E+00	0.00%
E2045	3/27/03	7:50am	3:09pm	439	32	1.30E+07	3/28/03	86	13	1.70067	4.67E-14	4/1/03	14	12	0.067	1.73E-15	43.16%
W2045	3/27/03	7:55am	3:11pm	436	37	1.00E+07	3/28/03	133	13	4	9.02E-14	4/1/03	12	12	0	0.00E+00	0.00%
N2046	3/28/03	7:56am	2:35pm	399	37	1.40E+07	3/31/03	14	12	0.08667	1.64E-15	4/2/03	11	11	0	0.00E+00	0.00%
E2046	3/28/03	8:04am	2:38pm	394	42	1.04E+07	3/31/03	18	12	0.2	4.40E-15	4/2/03	10	11	0	0.00E+00	0.00%
E2046	3/28/03	7:59am	2:35pm	396	41	1.61E+07	3/31/03	17	12	0.10667	3.73E-15	4/2/03	13	11	0.067	1.48E-15	37.34%
W2046	3/28/03	8:01am	2:40pm	399	36	1.50E+07	3/31/03	13	12	0.03333	8.00E-15	4/2/03	12	11	0.033	8.00E-15	19.99%

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)**Week 25 March 24 - March 26, 2003****Lakeshore East Project - 221 North Columbus Drive, Chicago, IL*******Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay**

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
3/24/03	Jerry Krane	PAM2211	006-234	2.5	551	1377500	3/28/03	9	13	0.00	0.00E+00	0.00%
3/24/03	Odell Morgan	PAM2212	002-574	2.5	552	1380000	3/28/03	11	13	0.00	0.00E+00	0.00%
3/24/03	Lindsay Aschlm	PAM2213	002-766	2.5	550	1375000	3/28/03	14	13	0.03	0.12E-15	1.22%
3/25/03	Lindsay Aschlm	PAM2214	006-234	2.5	403	1007500	3/31/03	11	12	0.00	0.00E+00	0.00%
3/26/03	Odell Morgan	PAM2217	002-574	2.5	491	1227500	3/31/03	10	12	0.00	0.00E+00	0.00%
3/26/03	Lindsay Aschlm	PAM2218	002-766	2.5	493	1232500	3/31/03	12	12	0.00	0.00E+00	0.00%
3/26/03	Jerry Krane	PAM2219	006-234	2.5	480	1225000	3/31/03	12	12	0.00	0.00E+00	0.00%
3/27/03	Tim O'Brien	PAM2221	002-766	2.5	520	1322500	4/1/03	10	12	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent**2000 DAC-Hours = 5 rem****DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml****Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml**

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor

Week #24 3/17/03-3/21/03

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/17/03	0	0.00E+00	0.00E+00	No Area Air Monitoring This Week
3/18/03	0	0.00E+00	0.00E+00	
3/19/03	0	0.00E+00	0.00E+00	
3/20/03	0	0.00E+00	0.00E+00	
3/21/03	0	0.00E+00	0.00E+00	
	0	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i \cdot C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = #DIV/0! uCi/ml

Percentage of Release Limit of = #DIV/0!
4E-15uCi/ml**South Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/17/03	0	0.00E+00	0.00E+00	No Area Air Monitoring This Week
3/18/03	0	0.00E+00	0.00E+00	
3/19/03	0	0.00E+00	0.00E+00	
3/20/03	0	0.00E+00	0.00E+00	
3/21/03	0	0.00E+00	0.00E+00	
	0	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i \cdot C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = #DIV/0! uCi/ml

Percentage of Release Limit of = #DIV/0!
4E-15uCi/ml**East Monitor**

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/17/03	0	0.00E+00	0.00E+00	No Area Air Monitoring This Week
3/18/03	0	0.00E+00	0.00E+00	
3/19/03	0	0.00E+00	0.00E+00	
3/20/03	0	0.00E+00	0.00E+00	
3/21/03	0	0.00E+00	0.00E+00	
	0	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i \cdot C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = #DIV/0! uCi/ml

Percentage of Release Limit of = #DIV/0!
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/17/03	0	0.00E+00	0.00E+00	No Area Air Monitoring This Week
3/18/03	0	0.00E+00	0.00E+00	
3/19/03	0	0.00E+00	0.00E+00	
3/20/03	0	0.00E+00	0.00E+00	
3/21/03	0	0.00E+00	0.00E+00	
	0	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum I_{ai} C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) =

#DN/DI uCi/ml

Percentage of Release Limit of =

#DN/DI

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Week 24

March 17, 2003 - March 21, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	blg counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	blg counts	net cpm	Concentration in uCi/ml	
No Area Air Monitoring This Week																	
PAM's ONLY																	

11/6/01 P 535 2535 847 279 2535 847

SLS

61:91 0002-42-004

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 24 March 17 - March 21, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
3/17/03	Lindsay Aschlm	PAM2201	002-166	2.5	425	1062500	3/18/03	18	10	0.27	6.33E-14*
3/17/03	Tim O'Brien	PAM2202	002-574	2.5	465	1212500	3/18/03	18	10	0.20	4.18E-14*
3/18/03	Jerry Krane	PAM2203	002-574	2.5	525	1312500	3/19/03	12	13	0.00	0.00E+00
3/18/03	Tim O'Brien	PAM2204	002-766	2.5	520	1300000	3/19/03	13	13	0.00	0.00E+00
3/19/03	Jerry Krane	PAM2205	002-574	2.5	498	1245000	3/20/03	10	10	0.00	0.00E+00
3/19/03	Lindsay Aschlm	PAM2206	002-766	2.5	496	1240000	3/20/03	12	10	0.07	1.38E-14*
3/20/03	Tim O'Brien	PAM2207	002-574	2.5	485	1212500	3/21/03	13	13	0.00	0.00E+00
3/20/03	Lindsay Aschlm	PAM2208	002-766	2.5	210	525000	3/21/03	11	13	0.00	0.00E+00
3/21/03	Tim O'Brien	PAM2209	002-574	2.5	500	1250000	3/24/03	11	11	0.00	0.00E+00
3/21/03	Jerry Krane	PAM2210	006-234	2.5	503	1257500	3/24/03	9	11	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Week 24 March 17 - March 21, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
3/17/03	Lindsay Aschim	PAM2201	002-766	2.5	425	1062500	3/21/03	9	13	0.00	0.00E+00	0.00%
3/17/03	Tim O'Brien	PAM2202	002-574	2.5	485	1212500	3/21/03	12	13	0.00	0.00E+00	0.00%
3/19/03	Lindsay Aschim	PAM2206	002-766	2.5	495	1240000	3/24/03	10	11	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor**Week #23 3/10/03-3/14/03****(High Volume)**

Date	Time Sampled (minutes)	Effluent Concentration In uCi/ml	Concentration x Sample Min / Day	Comments
3/10/03	0	0.00E+00	0.00E+00	No Area Air Monitoring This Week
3/11/03	0	0.00E+00	0.00E+00	
3/12/03	0	0.00E+00	0.00E+00	
3/13/03	0	0.00E+00	0.00E+00	
3/14/03	0	0.00E+00	0.00E+00	
	0	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) =

#DIV/0! uCi/ml

Percentage of Release Limit of =

#DIV/0!

4E-15uCi/ml

South Monitor

Date	Time Sampled (minutes)	Effluent Concentration In uCi/ml	Concentration x Sample Min / Day	Comments
3/10/03	0	0.00E+00	0.00E+00	No Area Air Monitoring This Week
3/11/03	0	0.00E+00	0.00E+00	
3/12/03	0	0.00E+00	0.00E+00	
3/13/03	0	0.00E+00	0.00E+00	
3/14/03	0	0.00E+00	0.00E+00	
	0	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) =

#DIV/0! uCi/ml

Percentage of Release Limit of =

#DIV/0!

4E-15uCi/ml

East Monitor

Date	Time Sampled (minutes)	Effluent Concentration In uCi/ml	Concentration x Sample Min / Day	Comments
3/10/03	0	0.00E+00	0.00E+00	No Area Air Monitoring This Week
3/11/03	0	0.00E+00	0.00E+00	
3/12/03	0	0.00E+00	0.00E+00	
3/13/03	0	0.00E+00	0.00E+00	
3/14/03	0	0.00E+00	0.00E+00	
	0	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

 $\sum T_i$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) =

#DIV/0! uCi/ml

Percentage of Release Limit of =

#DIV/0!

4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/10/03	0	0.00E+00	0.00E+00	No Area Air Monitoring This Week
3/11/03	0	0.00E+00	0.00E+00	
3/12/03	0	0.00E+00	0.00E+00	
3/13/03	0	0.00E+00	0.00E+00	
3/14/03	0	0.00E+00	0.00E+00	
	0	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

Σ T_i

Eq A3 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) =

ND/NM uCi/ml

Percentage of Release Limit of 10

0/11/03

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Week 23

March 10, 2003 - March 14, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/ml	
No Area Air Monitoring This Week																	
PAMs ONLY																	

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)**Week 23 March 10 - March 14, 2003****Lakeshore East Project - 221 North Columbus Drive, Chicago, IL*******Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay**

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
3/10/03	Lindsay Aschm	PAM2191	002-766	2.5	525	1312500	3/14/03	12	12	0.00	0.00E+00	0.00%
3/10/03	Jerry Krane	PAM2192	002-574	2.5	521	1302500	3/14/03	10	12	0.00	0.00E+00	0.00%
3/11/03	Jerry Krane	PAM2193	002-574	2.5	508	1270000	3/17/03	12	12	0.00	0.00E+00	0.00%
3/11/03	Tim O'Brien	PAM2194	006-234	2.5	516	1290000	3/17/03	11	12	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent**2000 DAC-Hours = 5 rem****DAC (Derived Air Concentration) for Th-232 = 5E-13 uCi/ml****Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml**

Personal Air Monitoring Summary Sheet (PAM's - Daily Analysis)

Week 23 March 10 - March 14, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
3/10/03	Lindsay Aschim	PAM2101	002-766	2.5	525	1312500	3/11/03	18	12	0.20	3.85E-14
3/10/03	Jerry Krane	PAM2102	002-574	2.5	521	1302500	3/11/03	20	12	0.27	5.17E-14
3/11/03	Jerry Krane	PAM2103	002-574	2.5	508	1270000	3/12/03	18	12	0.20	3.97E-14
3/11/03	Tim O'Brien	PAM2104	006-234	2.5	518	1290000	3/12/03	17	12	0.17	3.26E-14
3/12/03	Jerry Krane	PAM2105	006-234	2.5	516	1290000	3/13/03	11	13	0.00	0.00E+00
3/12/03	Lindsay Aschim	PAM2106	002-574	2.5	513	1282500	3/13/03	13	13	0.00	0.00E+00
3/13/03	Tim O'Brien	PAM2107	006-234	2.5	492	1230000	3/14/03	9	12	0.00	0.00E+00
3/13/03	Lindsay Aschim	PAM2108	002-766	2.5	497	1242500	3/14/03	12	12	0.00	0.00E+00
3/14/03	Tim O'Brien	PAM2109	006-234	2.5	458	1140000	3/17/03	9	12	0.00	0.00E+00
3/14/03	Jerry Krane	PAM2200	002-766	2.5	460	1150000	3/17/03	11	12	0.00	0.00E+00

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

North Monitor

Week #22 3/3/03-3/7/03

(High Volume)

Date	Time Sampled (minutes)	Effluent Concentration In uCi/ml	Concentration x Sample Min / Day	Comments
3/3/03	0	0.00E+00	0.00E+00	
3/4/03	203	1.49E-15	3.02E-13	
3/5/03	0	0.00E+00	0.00E+00	
3/6/03	0	0.00E+00	0.00E+00	
3/7/03	0	0.00E+00	0.00E+00	
	203	1.49E-15	3.02E-13	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (North) = 1.49E-15 uCi/ml

Percentage of Release Limit of = 37.25%
4E-15uCi/ml**South Monitor**

Date	Time Sampled (minutes)	Effluent Concentration In uCi/ml	Concentration x Sample Min / Day	Comments
3/3/03	0	0.00E+00	0.00E+00	
3/4/03	234	0.00E+00	0.00E+00	
3/5/03	0	0.00E+00	0.00E+00	
3/6/03	0	0.00E+00	0.00E+00	
3/7/03	0	0.00E+00	0.00E+00	
	234	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (South) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml**East Monitor**

Date	Time Sampled (minutes)	Effluent Concentration In uCi/ml	Concentration x Sample Min / Day	Comments
3/3/03	0	0.00E+00	0.00E+00	
3/4/03	201	0.00E+00	0.00E+00	
3/5/03	0	0.00E+00	0.00E+00	
3/6/03	0	0.00E+00	0.00E+00	
3/7/03	0	0.00E+00	0.00E+00	
	201	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum T_i C_i}{\sum T_i}$$

$$\sum T_i$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (East) = 0.00E+00 uCi/ml

Percentage of Release Limit of = 0.00%
4E-15uCi/ml

West Monitor

Date	Time Sampled (minutes)	Effluent Concentration in uCi/ml	Concentration x Sample Min / Day	Comments
3/3/03	0	0.00E+00	0.00E+00	
3/4/03	229	0.00E+00	0.00E+00	
3/5/03	0	0.00E+00	0.00E+00	
3/6/03	0	0.00E+00	0.00E+00	
3/7/03	0	0.00E+00	0.00E+00	
	229	0.00E+00	0.00E+00	

$$C_{avg} = \frac{\sum I_i C_i}{\sum T_i}$$

Eq A.9 NUREG 1400

Time Weighted Weekly

Effluent Concentration (West) = 0.00E+00 uCi/ml
 Percentage of Release Limit of = 0.00%

Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

Week 22

March 3, 2003 - March 7, 2003

Sample ID	date sampled	start time	stop time	total time sampled	cubic ft/min (CFM)	sample volume analyzed	day after analysis					four day analysis					% of Limit 4.00E-15 uCi/ml
							date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/ml	date analyzed	gross counts	blk counts	net cpm	Concentration in uCi/ml	
N2041	3/4/03	8:18am	11:30am	203	40	8.05E+06	3/6/03	18	11	0.23333	1.05E-14	3/10/03	14	13	0.033	1.49E-15	37.33%
S2041	3/4/03	7:51am	11:45am	234	42	9.74E+06	3/6/03	14	11	0.1	3.70E-15	3/10/03	11	13	0	0.00E+00	0.00%
E2041	3/4/03	8:20am	11:41am	201	36	7.57E+06	3/6/03	16	11	0.16667	7.94E-15	3/10/03	13	13	0	0.00E+00	0.00%
W2041	3/4/03	7:53am	11:42am	229	47	1.07E+07	3/6/03	21	11	0.33333	1.13E-14	3/10/03	13	13	0	0.00E+00	0.00%
<p>Tuesday March 4 was the only day during this week when thorium contaminated material was excavated and loaded. Day after analysis was not performed until 3/6/03 because of snow day (no work) on 3/5/03. GAH</p>																	

Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

Week 22 March 3 - March 7, 2003

Lakeshore East Project - 221 North Columbus Drive, Chicago, IL

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)
3/3/03	Lindsay Aschim	PAM2182	006-234	2.5	511	1277500	3/4/03	10	12	0.00	0.00E+00
3/3/03	Tim O'Brien	PAM2183	002-766	2.5	511	1277500	3/4/03	12	12	0.00	0.00E+00
3/4/03	Odell Morgan	PAM2184	002-574	2.5	195	487500	3/6/03	10	11	0.00	0.00E+00
3/4/03	Lindsay Aschim	PAM2185	006-234	2.5	178	445000	3/6/03	11	11	0.00	0.00E+00
3/4/03	Jerry Krane	PAM2186	002-766	2.5	473	1182500	3/6/03	14	11	0.10	2.13E-14*
No Work on 3/5/03 - Snow Day											
3/6/03	Tim O'Brien	PAM2187	002-574	2.5	507	1267500	3/7/03	16	10	0.20	3.98E-14*
3/6/03	Jerry Krane	PAM2188	002-766	2.5	498	1245000	3/7/03	17	10	0.23	4.73E-14*
3/7/03	Jerry Krane	PAM2189	002-766	2.5	495	1237500	3/10/03	12	13	0.00	0.00E+00
3/7/03	Lindsay Aschim	PAM2190	002-574	2.5	495	1237500	3/10/03	16	13	0.10	2.04E-14*

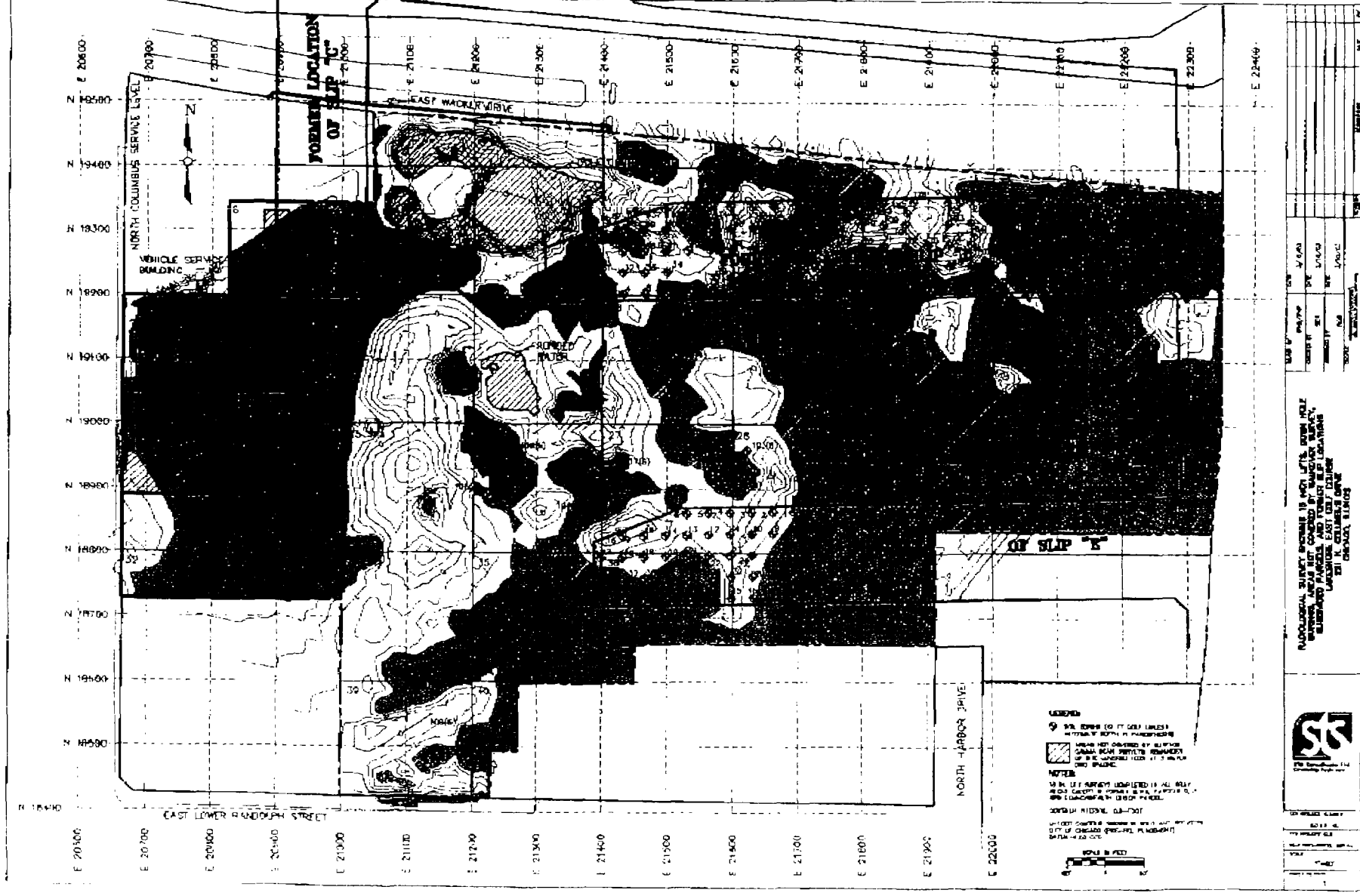
Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.

See attached 4 Day Analysis Form for Occupational Dose Limit Information.

Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)**Week 22 March 3 - March 7, 2003****Lakeshore East Project - 221 North Columbus Drive, Chicago, IL*******Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay**

Date Collected	Name	Sample ID	PAM #	Flow Rate (lpm)	Total Time Sampled	Total Sample Volume (ml)	Analysis Date	Gross Counts (30 min)	Bkg Counts (30 min)	Net CPM	Sample Concentration (uCi/ml)	% of DAC
3/4/03	Jerry Krane	PAM2186	002-766	2.5	473	1182500	3/10/03	10	13	0.00	0.00E+00	0.00%
3/8/03	Tim O'Brien	PAM2187	002-574	2.5	507	1267500	3/11/03	11	12	0.00	0.00E+00	0.00%
3/8/03	Jerry Krane	PAM2188	002-766	2.5	498	1245000	3/11/03	11	12	0.00	0.00E+00	0.00%
3/7/03	Lindsay Aschlm	PAM2190	002-766	2.5	495	1237500	3/12/03	11	12	0.00	0.00E+00	0.00%

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent**2000 DAC-Hours = 5 rem****DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml****Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml**





March 12, 2003

Ms. Verneta Simon, On-Scene Coordinator
Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for February 2003, 221 N. Columbus Drive, Chicago, Illinois – STS
Project No. 1-32193-XC

Dear Ms. Simon and Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies actions taken during February 2003 and activities planned or expected during March 2003.

PROGRESS DURING FEBRUARY 2003

1. Grading phase (Phase III) gamma surveys were initiated in late December and continued in accordance with Section 5.7 of SOP-210. Table 1 summarizes the status of the lift surveys at the project site (refer to Figure 1 for the grid locations). Note that grids 6, 14, 23 and 32, along with the western portion of grids 15, 24 and 33, are not included within the current Lakeshore East Development parcel.

Table 1
Grading Phase Survey Status

Status as of February 28, 2003	Grid Locations
Complete	1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29, 30, 31, 34, 35, 36, 37, 38, 39, 40
In Progress	7, 33
Remaining	15, 24

2. The USEPA was notified in a STS letter dated February 4, 2002, that radiologically-impacted soil just slightly above the cleanup threshold extended beyond the property line in the southeast corner of grid 29 in the vicinity of North Harbor Drive.
3. Grading phase gamma surveys of the historical fill observed elevated gamma readings in an isolated area of grid 7 the week of February 3, 2003. The area was designated an exclusion zone and will be excavated in early March.
4. Construction of an access ramp from Lakeshore Drive was initiated on Friday February 7 in the grid 31 area of the southern slip. Excavation activities within the slip were monitored during the construction phase for the presence of radiologically-impacted material. No elevated gamma readings were observed during the survey activities.

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

5. The USEPA issued a letter dated February 11, 2003, confirming that the remediation of known radiologically-impacted materials was complete in the southern slip (Slip E).
6. Verification surveys were completed by the USEPA in four areas. The grid in which the area is located and the date the notice of successful verification was signed by the USEPA are provided in Table 2. Please note that each grid is subdivided into four quadrants. For notation purposes, the quadrants are denoted with letters starting with the northwest corner and proceeding in a clockwise direction (i.e., 10A, 10B, 10C and 10D).

Table 2
Notice of Successful Verification

Survey Grid Designation	USEPA Signature Date
10B-11A East	2/12/2003
10B-11A West	2/7/2003
10A	2/7/2003
29C	2/7/2003

7. Importing of fill soil from off-site was initiated the week of February 10. A composite sample collected on February 20 indicated a total radium result of 3.14 pCi/g. This value is below the total radium criteria of 3.7 pCi/g established for imported fill by the USEPA (see the weekly report dated February 24, 2003 for a copy of the results). In accordance with Work Plan the fill soils from each borrow source will be tested at least once per 10,000 cubic yards.
8. People's Gas excavated several test pits to locate a gas line within the former northern slip (grid 9) during the week of February 24, 2003. Excavation activities were monitored for the presence of radiologically-impacted material. No elevated gamma readings were observed.
9. No radiologically-impacted materials were excavated during February. Table 3 below summarizes the quantity of radiologically-impacted material excavated for the project.

Table 3
Impacted Soil Loading Summary

Containers Loaded February, 2003	Cumulative Project Total
0	176

10. In accordance with the approval issued by the USEPA on December 13, 2002, area air monitoring was to be conducted during the excavation or handling of radiologically-impacted soils. Since no excavation was conducted, only personal air monitoring was performed. No exceedances of the allowable limits have been observed (refer to weekly reports for analytical data).

PLANNED ACTIVITIES FOR MARCH 2003

1. The isolated area of radiologically-impacted material within grid 7 will be excavated. The USEPA will be requested to survey the area and sign-off that the area has successfully remediated.
2. Grading phase (lift) gamma surveys of historical fill will continue. It is anticipated that the lift surveys (Phase III) will be completed early in March. A letter will be submitted to the USEPA indicating the completion of the Phase II (remediation of identified radiologically-impacted materials) and Phase III (lift surveys of historic fill) activities. The letter will also request that the USEPA to authorize the

initiation of the closure report activities. It is understood that the closure report is due within 60 days of USEPA notice that all fieldwork is complete.

3. Gamma surveys will be conducted during infrastructure and construction related activities within the former slip areas. The areas will be surveyed for elevated gamma radiation as the activities proceed. The USEPA will be notified upon discovery of radiologically-impacted material within the former slips. Excavation activities will take place as necessary to remediate any radiologically-impacted soil discovered during the infrastructure/construction related activities. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
4. In accordance with the approval issued by the USEPA on December 13, 2002, area air monitoring will only be conducted at the site during excavation or handling of radiologically-impacted soils. Personal air monitoring will be performed during excavation activities or test pit investigations conducted within the former slip areas.
5. Authorization from the USEPA will be sought to discontinue the issuance of weekly reports for the Lakeshore East project once the Phase II and Phase III related field activities are complete. Monthly reports will continue to be submitted to the USEPA until submittal of the closure report.
6. In accordance with Work Plan the fill soils imported to the site will be tested for total radium at least once per 10,000 cubic yards for each borrow source.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.



Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC



February 13, 2003

Ms. Verneta Simon, On-Scene Coordinator
Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Progress Report for January 2003, 221 N. Columbus Drive, Chicago, Illinois – STS Project No. 1-32193-XC

Dear Ms. Simon and Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies actions taken during January 2003 and activities planned or expected during February 2003.

PROGRESS DURING JANUARY 2003

1. Grading phase (Phase III) gamma surveys were initiated in late December 2002 and continued in accordance with Section 5.7 of SOP-210. Table 1 summarizes the status of the lift surveys at the project site (refer to Figure 1 for the grid locations).

Table 1
Grading Phase Survey Status

Status	Grid Locations
Complete	1, 2, 5, 13, 16, 17, 22, 25, 26, 27, 28, 29, 30, 31, 34, 35, 37, 38, 39, 40
In Progress	4, 10, 11, 12, 21, 36
Remaining	3, 7, 8, 9, 15, 18, 19, 20, 24, 33

2. In late December test pits were excavated to locate existing utilities and proposed caissons. The excavations were surveyed as the excavations proceeded. Elevated gamma readings were measured at several proposed caisson locations (R-16, R-20, 6-1, S-9 and S-11) located within the southern slip (Slip E) in grid location 36 (refer to Figure 1). The excavation of this radiologically-impacted soil was completed the week of January 13, 2003 and a notice of successful verification was signed by the USEPA on January 29, 2003.
3. During the week of January 6, 2003 test pits were excavated for People's Energy to locate utilities in grid 9. The excavations were surveyed for elevated gamma radiation as the excavations proceeded. No elevated gamma readings were measured during the test pit operations.
4. Trenching conducted during the week of January 13, 2003 discovered an isolated area of elevated gamma readings in Slip E (eastern edge of the southeast corner of grid 29). Soil was excavated from the area during the weeks of January 20 and 27, 2003. The excavation activities indicated that the radiologically-impacted material just slightly above the cleanup criteria extended beyond the property boundary.

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

5. Elevated gamma readings were observed during lift surveys conducted in grids 10 and 11 just north of the north slip (Slip D) the week of January 20, 2003. Soil excavation was initiated during the week of January 27, 2003.
6. The USEPA completed a verification survey and a notice of successful verification was signed by the USEPA on January 29, 2003 for the southwest corner of grid 28 (E-F.5, 13-19).
7. A response was received from the USEPA on January 7, 2003, regarding the casing survey (STS, November 6, 2002) conducted below the watertable for the borings installed in Slip E (southwest corner of grid 28). STS issued a response dated January 10, 2003 which concluded that review of the information in the USEPA correspondence and revision of one of the factors used in the evaluation indicated that no exceedances were detected. On January 30, 2003, correspondence from the USEPA was received agreeing with STS's interpretation of the data that no exceedances were detected.
8. In accordance with the approval issued by the USEPA on December 13, 2002, area air monitoring was conducted during the excavation or handling of radiologically-impacted soils. Personal air monitoring was performed during excavation and soil handling activities, grading surveys and exploration activities within the former slip areas. No exceedances of the allowable limits have been observed (refer to weekly reports for analytical data).
9. Table 2 below summarizes the quantity of radiologically-impacted material excavated during January as well as the cumulative total for the project.

Table 2
Impacted Soil Loading Summary

Containers Loaded January, 2003	Cumulative Project Total
19½	176

PLANNED ACTIVITIES FOR FEBRUARY 2003

1. Grading phase (lift) gamma surveys of historical fill will continue to be conducted at the site.
2. Gamma surveys will be conducted during infrastructure and construction related activities within the former slip areas. The areas will be surveyed for elevated gamma radiation as the activities proceed.
3. Excavation activities will take place as necessary to remediate any radiologically-impacted soil discovered during the grading phase lift surveys or the infrastructure/construction related activities. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
4. The USEPA will be notified that radiologically-impacted material extends beyond the property boundary in the southeast corner of grid 29 in the vicinity of North Harbor Drive.
5. Remediation of radiologically-impacted materials will be completed in the exclusion zones setup in grids 10 and 11. When complete, the USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
6. In accordance with the approval issued by the USEPA on December 13, 2002, area air monitoring will only be conducted at the site during excavation or handling of radiologically-impacted soils.

Personal air monitoring will continue to be performed during excavation activities as well as during grading and test pit investigations.

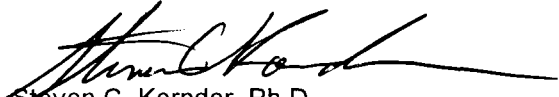
7. STS will provide clarification to the USEPA regarding the sign-off requested for the borehole investigation area in grid 28 of the southern slip (refer to item 7 in the Work Completed section).

Preparation of the Site Closure Report will begin following completion of the removal of radiologically-impacted materials requiring excavation and the grading survey activities (Phase III). It is understood that the closure report is due within 60 days of notice that all fieldwork is complete.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

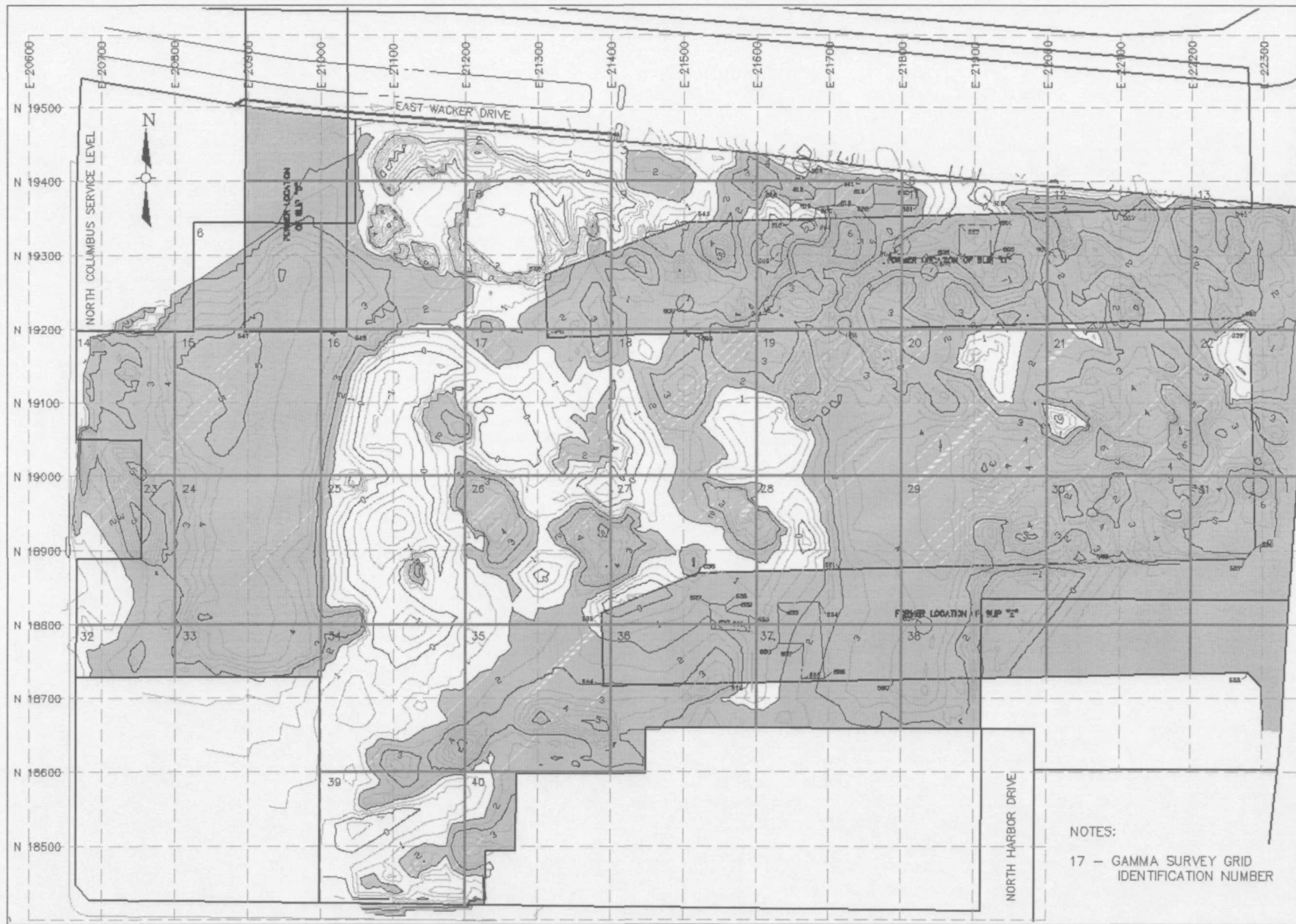
STS CONSULTANTS, LTD.



Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC



NOTES:

17 - GAMMA SURVEY GRID
IDENTIFICATION NUMBER



STS Consulting Engineers Ltd.
Consulting Engineers

STS PROJECT NO.

32193-XC

STS PROJECT FILE

CG-132193-2.dwg

SCALE

1"=120'

FIGURE NO.

1

GRADING PHASE GAMMA SURVEY GRID
NETWORK
LAKE SHORE EAST GOLF COURSE
221 N. COLUMBUS DRIVE
CHICAGO, ILLINOIS

DRAWN BY	PVP	DATE	12/02/02
CHECKED BY	RGB	DATE	12/02/02
APPROVED BY	SGT	DATE	12/02/02
CAUTION	X:\PROJ\CG\132193\CG-132193-2.dwg		

11/27/2002 12:



March 12, 2003

Ms. Verneta Simon, On-Scene Coordinator
Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for February 2003, 221 N. Columbus Drive, Chicago, Illinois – STS
Project No. 1-32193-XC

Dear Ms. Simon and Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies actions taken during February 2003 and activities planned or expected during March 2003.

PROGRESS DURING FEBRUARY 2003

1. Grading phase (Phase III) gamma surveys were initiated in late December and continued in accordance with Section 5.7 of SOP-210. Table 1 summarizes the status of the lift surveys at the project site (refer to Figure 1 for the grid locations). Note that grids 6, 14, 23 and 32, along with the western portion of grids 15, 24 and 33, are not included within the current Lakeshore East Development parcel.

Table 1
Grading Phase Survey Status

Status as of February 28, 2003	Grid Locations
Complete	1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29, 30, 31, 34, 35, 36, 37, 38, 39, 40
In Progress	7, 33
Remaining	15, 24

2. The USEPA was notified in a STS letter dated February 4, 2002, that radiologically-impacted soil just slightly above the cleanup threshold extended beyond the property line in the southeast corner of grid 29 in the vicinity of North Harbor Drive.
3. Grading phase gamma surveys of the historical fill observed elevated gamma readings in an isolated area of grid 7 the week of February 3, 2003. The area was designated an exclusion zone and will be excavated in early March.
4. Construction of an access ramp from Lakeshore Drive was initiated on Friday February 7 in the grid 31 area of the southern slip. Excavation activities within the slip were monitored during the construction phase for the presence of radiologically-impacted material. No elevated gamma readings were observed during the survey activities.

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

5. The USEPA issued a letter dated February 11, 2003, confirming that the remediation of known radiologically-impacted materials was complete in the southern slip (Slip E).
6. Verification surveys were completed by the USEPA in four areas. The grid in which the area is located and the date the notice of successful verification was signed by the USEPA are provided in Table 2. Please note that each grid is subdivided into four quadrants. For notation purposes, the quadrants are denoted with letters starting with the northwest corner and proceeding in a clockwise direction (i.e., 10A, 10B, 10C and 10D).

Table 2
Notice of Successful Verification

Survey Grid Designation	USEPA Signature Date
10B-11A East	2/12/2003
10B-11A West	2/7/2003
10A	2/7/2003
29C	2/7/2003

7. Importing of fill soil from off-site was initiated the week of February 10. A composite sample collected on February 20 indicated a total radium result of 3.14 pCi/g. This value is below the total radium criteria of 3.7 pCi/g established for imported fill by the USEPA (see the weekly report dated February 24, 2003 for a copy of the results). In accordance with Work Plan the fill soils from each borrow source will be tested at least once per 10,000 cubic yards.
8. People's Gas excavated several test pits to locate a gas line within the former northern slip (grid 9) during the week of February 24, 2003. Excavation activities were monitored for the presence of radiologically-impacted material. No elevated gamma readings were observed.
9. No radiologically-impacted materials were excavated during February. Table 3 below summarizes the quantity of radiologically-impacted material excavated for the project.

Table 3
Impacted Soil Loading Summary

Containers Loaded February, 2003	Cumulative Project Total
0	176

10. In accordance with the approval issued by the USEPA on December 13, 2002, area air monitoring was to be conducted during the excavation or handling of radiologically-impacted soils. Since no excavation was conducted, only personal air monitoring was performed. No exceedances of the allowable limits have been observed (refer to weekly reports for analytical data).

PLANNED ACTIVITIES FOR MARCH 2003

1. The isolated area of radiologically-impacted material within grid 7 will be excavated. The USEPA will be requested to survey the area and sign-off that the area has successfully remediated.
2. Grading phase (lift) gamma surveys of historical fill will continue. It is anticipated that the lift surveys (Phase III) will be completed early in March. A letter will be submitted to the USEPA indicating the completion of the Phase II (remediation of identified radiologically-impacted materials) and Phase III (lift surveys of historic fill) activities. The letter will also request that the USEPA to authorize the

initiation of the closure report activities. It is understood that the closure report is due within 60 days of USEPA notice that all fieldwork is complete.

3. Gamma surveys will be conducted during infrastructure and construction related activities within the former slip areas. The areas will be surveyed for elevated gamma radiation as the activities proceed. The USEPA will be notified upon discovery of radiologically-impacted material within the former slips. Excavation activities will take place as necessary to remediate any radiologically-impacted soil discovered during the infrastructure/construction related activities. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.
4. In accordance with the approval issued by the USEPA on December 13, 2002, area air monitoring will only be conducted at the site during excavation or handling of radiologically-impacted soils. Personal air monitoring will be performed during excavation activities or test pit investigations conducted within the former slip areas.
5. Authorization from the USEPA will be sought to discontinue the issuance of weekly reports for the Lakeshore East project once the Phase II and Phase III related field activities are complete. Monthly reports will continue to be submitted to the USEPA until submittal of the closure report.
6. In accordance with Work Plan the fill soils imported to the site will be tested for total radium at least once per 10,000 cubic yards for each borrow source.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

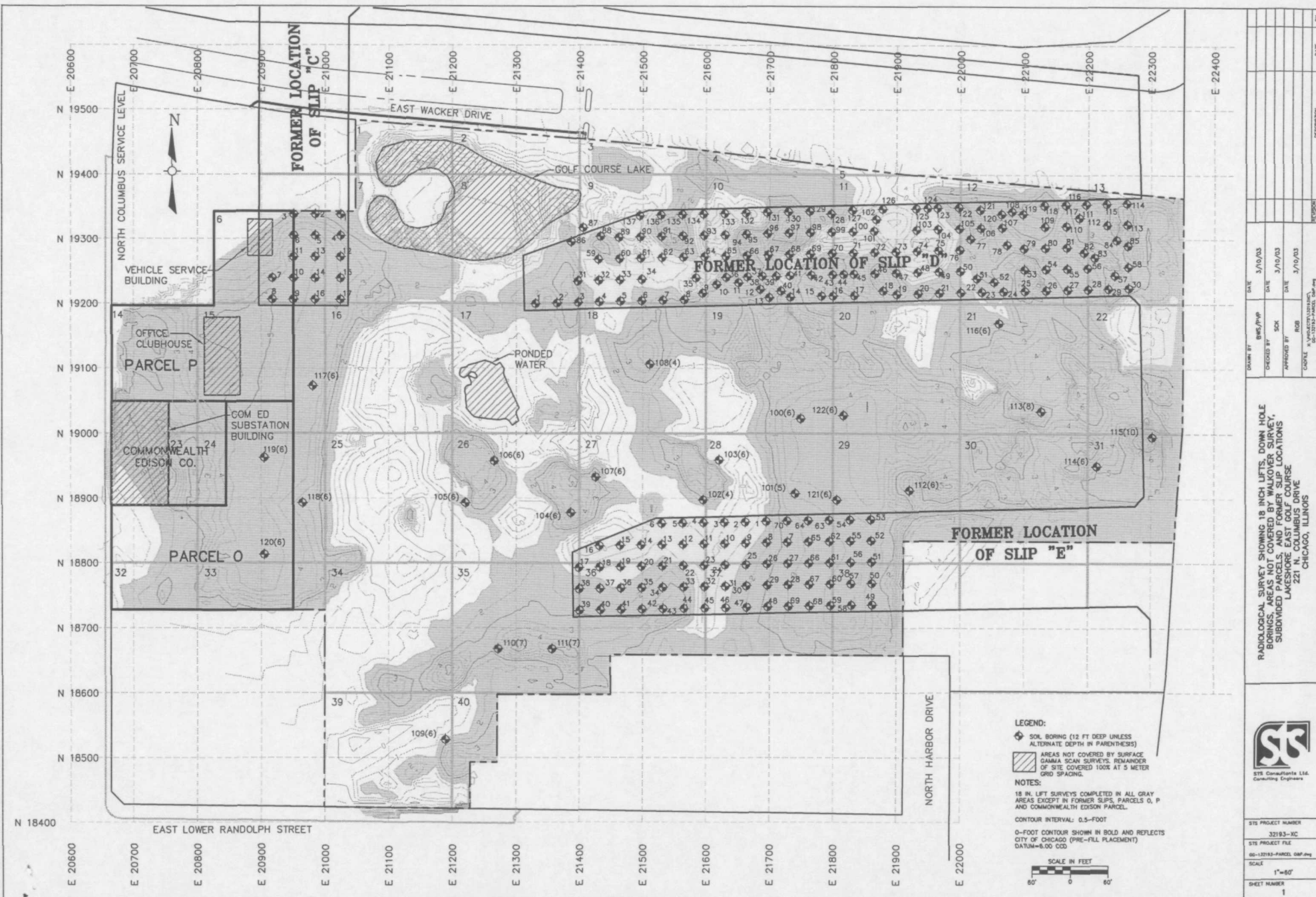
STS CONSULTANTS, LTD.



Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC



**STS Consultants, Ltd.**

750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510

FACSIMILE TRANSMISSION

Date: December 13, 2002

To: Verneta Simon/Fred Micke USEPA Fax #: 312-353-9176

Kara Hughes Lakeshore East, LLC Fax #: 312-642-2773

Sean Bezark Altheimer & Gray Fax #: 312-715-4800

Barbara Magel Karaganis, White & Magel Ltd. Fax #: 312-836-9083

Mark Krippel Kerr-McGee Chemical LLC Fax #: 630-231-3990

Pages being transmitted, incl. Cover: 4

CC: **Fax No.:**

From: Steve Komder **Phone:** 847-279-2500

Re: Lakeshore East, 221 N. Columbus Dr., Chicago, IL

☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow

Message:

Attached is the monthly report for the Lakeshore East site at 221 N. Columbus Drive in Chicago, IL.
Please contact me with any questions.

IMPORTANT: This facsimile is intended only for the of the individual or entity to which it is addressed and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this facsimile is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return this facsimile to us at the above address via the United States Postal Service. Thank you.

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL (847) 279-2500 IMMEDIATELY

**STS CONSULTANTS**

STS Consultants, Ltd.
750 Corporate Woods Parkway
Vernon Hills, Illinois 60061-3153

voice 847-279-2500
fax 847-279-2520
web www.stsconsultants.com

December 13, 2002

Ms. Verneta Simon, On-Scene Coordinator
Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Progress Report for November 2002, 221 N. Columbus Dr., Chicago, Illinois – STS Project No. 1-32193-XC

Dear Ms. Simon and Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies actions taken during November 2002 and activities planned or expected during December 2002.

PROGRESS DURING NOVEMBER 2002

- Excavation activities proceeded slightly below the water table in the vicinity of boring E-25. To investigate the potential presence or absence of radiological material below the water table, four casings were installed and surveyed on October 29, 2002. A summary of the downhole gamma survey results conducted October 29 was submitted to the USEPA on November 6, 2002.
- The USEPA conducted verification surveys in several remediated areas in November, including several areas in the northern slip area on Friday November 29. Verification signoff forms for the November 29 surveys will be forwarded to the USEPA on completion of the verification sample analysis in early December. The table below summarizes the signoffs received through the end of November from the USEPA for the project.

Summary of Signed Verification Forms

Location	Grid Designation	USEPA Signature Date
North Slip Area	RR-SS, 43-45	11/19/02
	KK-MM.5, 54-56.5	11/19/02
	KK-OO, 41-44	11/19/02
Southern Slip	E-K, 1-13	11/19/02
	C-E, 9.5-10.5	11/19/02
	F-J, 29-35	10/18/02

- Area and personnel air monitoring was conducted (including background) and submitted with the weekly reports (refer to weekly reports for analytical data). No exceedances of the allowable limits have been measured.
- Test pits for locating existing utilities were excavated in the southern slip area (former slip E). These areas were surveyed for elevated gamma radiation as the explorations proceeded.

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Dr., Chicago, Illinois.

U.S. Environmental Protection Agency
STS Project NO. 1-32193-XC
December 13, 2002
Page 2

- Localized grading phase (Phase III) gamma survey activities were initiated on Tuesday November 26. Areas of historical fill without documented radiological impacts were excavated in lifts and surveyed in accordance with Section 5.7 of SOP-210. Specifically, lift surveys were conducted within the historical fill (shaded areas) of grid locations 34, 39 and 40 (refer to Figure 1).


PLANNED ACTIVITIES FOR DECEMBER 2002

- The USEPA will be requested to provide comments on the October 29 casing survey conducted in the vicinity of boring E-25 of the southern slip. A report summarizing the results of the survey was submitted to the USEPA on November 6, 2002.
- Excavation of impacted materials in the northern slip area (Slip E) will be completed early in December. These removal actions will complete the excavation of known radiologically-impacted materials at the project site.
- Verification and signoff by the USEPA will be obtained for the remainder of the remediated areas.
- STS will request the USEPA allow area air-monitoring to be discontinued following the completion of the excavation of the known areas of radiologically-impacted soil. This air monitoring would be reinstated if removal activities were required to address newly discovered materials.
- Test pits for locating existing utilities and proposed caissons will be conducted at the project site. These areas will be surveyed for elevated gamma radiation as explorations proceed.
- Grading phase (lift) surveys will continue in localized areas prior to the initiation of the site-wide grubbing and grading surveying.
- Grubbing (tree and sod removal) will be initiated in early to mid-December. Site-wide grading and grading surveying (Phase III of the Work Plan) will start following completion of the site grubbing.
- Preparation of the Site Closure Report will begin following completion of the site grading phase surveys (Phase III). It is understood that the closure report is due within 60 days of notice that all field work is complete.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.




Steven C. Komder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC



		GRADING PHASE GAMMA SURVEY GRID NETWORK LAKE SHORE EAST GOLF COURSE 221 N. COLUMBUS DRIVE CHICAGO, ILLINOIS		DATE 12/02/02
STS CONSULTING LTD. Consulting Engineers		DATE 12/02/02		DATE 12/02/02
STS PROJECT NO. 32193-XC		DATE 12/02/02		DATE 12/02/02
STS PROJECT FILE 100-102193-2.dwg		DATE 12/02/02		DATE 12/02/02
SCALE 1"=120'		DATE 12/02/02		DATE 12/02/02
DRAWN BY PVP		DATE 12/02/02		DATE 12/02/02
CHECKED BY PGB		DATE 12/02/02		DATE 12/02/02
APPROVED BY SGT		DATE 12/02/02		DATE 12/02/02
DATE 12/02/02		DATE 12/02/02		DATE 12/02/02

NOTES:
 17 - GAMMA SURVEY GRID
 IDENTIFICATION NUMBER



November 25, 2002

Ms. Verneta Simon, On-Scene Coordinator
Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Progress Report for October 2002, 221 N. Columbus Drive, Chicago, Illinois – STS Project No. 1-32193-XC

Dear Ms. Simon and Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies actions taken during October 2002 and activities planned or expected during November 2002.

Progress During October 2002

Removal Action Activities

- Approval to mobilize was received in correspondence from the USEPA on September 20, 2002. A revised Work Plan¹ incorporating the USEPA requested modifications was submitted to the USEPA on September 30, 2002.
- Laboratory equipment was moved to the site and calibration completed.
- Site-specific project training was conducted at the site on October 7, 2002 and excavation activities commenced in the southern slip at the largest of the three areas of impacted material (refer to the boring E-25 area in the Work Plan) on October 8, 2002.
- Excavation activities proceeded slightly below the water table in the vicinity of boring E-25. An unfiltered sample of the groundwater within the base of the excavation was collected for analysis (see Attachment 1). To investigate the potential presence of radiological material below the water table, four casings were installed and surveyed on October 29, 2002.
- Verification signoff by the USEPA on the remediation of the boring E-56 area in the southern slip was received on October 18, 2002.
- Area and personnel air monitoring was conducted (including background) and submitted with the weekly reports (refer to weekly reports for analytical data). No exceedances of the allowable limits have been measured.

Planned Activities for November 2002

- Excavation of impacted materials in the southern slip area (Slip E) will be completed.
- A recent summary of the downhole gamma survey results conducted October 29, 2002 will be submitted to the USEPA. The USEPA will be requested to provide comments on the October 29 casing survey.
- Verification and signoff by the USEPA will be obtained for the southern slip areas.
- Removal of radiologically-impacted material in the northern slip will proceed and may be completed in late November.
- Verification and signoff by the USEPA will be obtained for the northern slip areas as they are remediated.

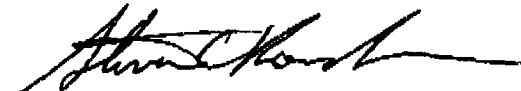
¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

Upon notice that the radiologically-impacted materials requiring excavation have been removed from the site (Phase II of the Work Plan), grading and related surveying activities (Phase III) will commence. Preparation of the Site Closure Report will begin following completion of the site grading (Phase III). It is understood that the closure report is due within 60 days of notice that all field work is complete.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.



Steven C. Komder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC



STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel 314 298 8566
Fax 314 298 8757
www.sthinc.com

ANALYTICAL REPORT

Waste Characterization

Lot #: F2J150191

Rich Berggreen

STS Acquisitions Co.
750 Corporate Woods Parkway
Vernon Hills, IL 60061

SEVERN TRENT LABORATORIES, INC.

A handwritten signature in black ink, appearing to read "John D. Powell".

John D. Powell
Project Manager

October 25, 2002

STL St. Louis is a part of Severn Trent Laboratories, Inc.

LOT # F2J150191

Case Narrative
LOT NUMBER: F2J150191

This report contains the analytical results for the sample received under chain of custody by STL St. Louis on October 15, 2002. This sample is associated with your Waste Characterization project.

All applicable quality control procedures met method-specified acceptance criteria except as noted below.

This report is incomplete without the case narrative. All results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Affected Samples:

F2J150191 (1): H-15.5-6

Affected Methods:

9310 MOD

Case Narrative:

The MDC is elevated due to the amount of solids in this sample.

METHODS SUMMARY

F2J150191

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Cs-137 & Hits by Gamma GAMMA SPEC MULTI ISO CAL	HASL 300 MOD	
Gross Alpha/Beta by GFPC Th230/Sr90-Y90 cal	SW846 9310 MOD	

References:

HASL Health and Safety Laboratory

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

LOT # F2J150191

SAMPLE SUMMARY

F2J150191

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
E92N2	001	H-15.5-6	10/14/02	08:30

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-15.5-6

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F2J150191-001
Work Order: E92N2
Matrix: WATER

Date Collected: 10/14/02 0830
Date Received: 10/15/02 0845

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Std #
GROSS A/B BY GFPC SW546 9310 MOD				pCi/L	9310 MOD			
Gross Alpha	74		16	10	10/21/02	10/24/02	2294264	
Gross Beta	82		12	11	10/21/02	10/24/02	2294264	
Gamma Cs-137 & Hits by HASL 300 MOD				pCi/L	300 MOD			
Cesium 137	4.3	U	6.5	13	10/22/02	10/22/02	2295346	

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

LOT # F2J150191

STS ACQUISITIONS CO. dba STS CONS., LTD.

Client Sample ID: H-15.5-6 DUP

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F2J150191-001X
Work Order: E92N2
Matrix: WATER

Date Collected: 10/14/02 0830
Date Received: 10/15/02 0845

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	MDC	Prep Date	Analysis Date	Batch #	Yld t
Gamma Cs-137 & Bk by HASL 300 MOD								
				pCi/L		300 MOD		
Cesium 137	-3.6	U	6.6	11	10/22/02	10/22/02	2295346	
GROSS A/B BY GFPC SW846 9310 MOD								
				pCi/L		9310 MOD		
Gross Alpha	74		16	10	10/21/02	10/24/02	2294264	
Gross Beta	75		12	10	10/21/02	10/24/02	2294264	

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

U Result is less than the sample detection limit.

LOT # F2J150191

METHOD BLANK REPORT

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F2J150191
Matrix: WATER

Parameter	Result	Qual	Total	MDC	Prep Date	Lab Sample ID		
			Concrt. (2 σ+/-)			Analysis Date	Batch #	File #
Gamma Cs-137 & Hits by HASL 300 MOD			pCi/L	300 MOD		F2J220000-346B		
Cesium 137	0.8	U	6.3	12	10/22/02	10/22/02	2295346	
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L	9310 MOD		F2J210000-264B		
Gross Alpha	0.43	U	0.53	0.85	10/21/02	10/24/02	2294264	
Gross Beta	0.5	U	1.0	1.7	10/21/02	10/24/02	2294264	

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC

U Result is less than the sample detection limit.

LOT # F2J150191

Laboratory Control Sample Report

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F2J150191
Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	NDC	% Yld	% Rec	Lab Sample ID QC Control Limits
GROSS A/B BY GPC SW846 9310 MOD							
			pCi/L	9310 MOD			F2J210000-264C
Gross Alpha	49.5	42.3	5.1	0.7		85	(63 - 139)
	Batch #:	2294264			Analysis Date:	10/24/02	
GROSS A/B BY GPC SW846 9310 MOD							
			pCi/L	9310 MOD			F2J210000-264C
Gross Beta	97.0	98	10	2		101	(79 - 116)
	Batch #:	2294264			Analysis Date:	10/24/02	
Gamma Cs-137 & Hits by HASL 300 MOD							
			pCi/L	300 MOD			F2J220000-346C
Americium 241	309000	314000	13000	400		102	(82 - 118)
Cesium 137	126000	127000	17000	200		101	(90 - 110)
Cobalt 60	223000	221000	23000	200		99	(90 - 110)
	Batch #:	2295346			Analysis Date:	10/22/02	

NOTE(S)

NDC is determined by instrument performance only
Calculations are performed before rounding to avoid round-off error in calculated results

LOT # F2J150191

DUPLICATE EVALUATION REPORT

Severn Trent Laboratories - Radiochemistry

Client Lot ID: F2J150191
 Matrix: WATER

Date Sampled: 10/14/02
 Date Received: 10/15/02

Parameter	SAMPLE Result	Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2σ +/-)	% Yld	QC Sample ID Precision
Gamma Cs-137 & Hits by HASL 300 MOD			pCi/L	300 MOD			F2J150191-001
Cesium 137	4.3 U	6.5		-3.6 0	6.6		2.24 %RPD
	Batch #: 2295346	(Sample)		2295346	(Duplicate)		
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L	9310 MOD			F2J150191-001
Gross Alpha	74	16		74	16		0.5 %RPD
Gross Beta	82	12		75	12		8 %RPD
	Batch #: 2294264	(Sample)		2294264	(Duplicate)		

NOTE(S)

Data are incomplete without the case narrative.
 Calculations are performed before rounding to avoid round-off error in calculated results

U Result is less than the sample detection limit.

MATRIX SPIKE REPORT

Severn Trent Laboratories - Radiochemistry

Client Lot Id: F2J150191
Matrix: WATER

Date Sampled: 10/14/02
Date Received: 10/15/02

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Xld.	Sample Result	Total Uncert. (2σ +/-)	QC Sample ID		QC Control Limits
							%YLD	%REC	
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L		9310 MOD		F2J150191-001		
Gross Alpha	254	366	48		74	16		115	(63 - 139)
	Batch #:	2294264			Analysis Date:	10/24/02			
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L		9310 MOD		F2J150191-001		
Gross Beta	497	625	65		82	12		109	(79 - 116)
	Batch #:	2294264			Analysis Date:	10/24/02			

NOTE(S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off errors in calculated results.

PSL20300
Page 1

SEVERN TRENT LABORATORIES, INC
CLIENT ANALYSIS SUMMARY
STL St. Louis

Run Date: 10/15/02
Time: 14:09:20
User Id.: ZAHNERM

CLIENT: 378708 STS ACQUISITIONS CO. dba STS CONS., LTD. QUOTE/SAR #: 43710
PROJECT MANAGER: John D. Powell LAB ID: F-2J150191-001
PROJECT #: WORK ORDER: E92N2
REPORT TO: Rich Berggreen RECEIVING DATE: 10/15/02
P.O. NUMBER: SAMPLING DATE: 10/14/02
SITE: Waste Characterization ANALYTICAL DUE DATE: 10/22/02N
AMOUNT REC'D: 2XLG REPORT DUE DATE: 10/22/02
STORAGE LOC: RAD PRIORITY: 07
LOT COMMENTS: SAMPLING TIME: 8:30
MATRIX: WATER RECEIVING TIME: 8:45
USAF MATRIX:
SAMPLE ID: ~~1 LITER GLASS H-15.5-6~~
QC PACKAGE: Report ~~Form~~ SDG# :
SAMPLE COMMENTS:

Beginning Depth: .00 Ending Depth: .00

***** ANALYSIS *****

	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
GROSS A/B BY GFPC SW846 9310 MOD	06	10/15/02	0/00/00	4/12/03
PREP & SEP RC-0020, CT SL-13021				
(I-FR-ZA-01) E92N2-1-AA Protocol: A		QC Program:	STANDARD TEST SET	
Gamma Cs-137 & Hits by HASL 300 MOD	06	10/15/02	0/00/00	4/12/03
PREP RC5016/RC0025, CT RD0101				
STL: Cs-137 by Gamma				
(I-G7-0A-01) E92N2-1-AC Protocol: A		QC Program:	STANDARD TEST SET	

Chain of Custody Record

**Severn Trent Laboratories, Inc.**

STL-4124 (0901)

Client STS			Project Manager Steve Kordeck			Date 10/14/02			Chain of Custody Number 147552							
Address 750 Corporate Wood Pkwy			Telephone Number (Area Code)/Fax Number 847-279-2448			Lab Number			Page 1 of 1							
City Vernon Hills		State IL	Zip Code 60061		Site Contact		Lab Contact S. Powell		Analysis (Attach list if more space is needed)							
Project Name and Location (State) Lakeshore East					Carrier/Waybill Number			Special Instructions/ Conditions of Receipt								
Contract/Purchase Order/Quote No. Proj # 1-32193XC																
Sample I.D. No. and Description (Containers for each sample may be combined on one line)			Date	Time	Matrix				Containers & Preservatives				Temp <i>gross spec</i> <i>gross beta</i> <i>gross alpha</i>			
					Ar	Aqueous	Sox	Sox	Unpres	H2SO4	HNO3	HCl		NaOH	ZnAc	NiOH
1 liter glass H-15.5			10/14/02	8:30		X			X							
1/2 liter H-15.5			10/14/02	6:30		X			X							
Temp Blank			—	—		X			X							

Possible Flazand Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client

~~Disposal By Lab~~

Archive For



Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other

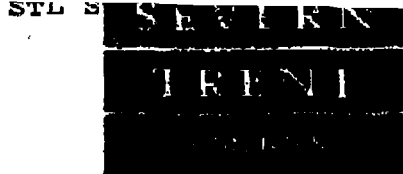
QC Requirements (Specify)

1. Relinquished By 	Date 10/14/12	Time 10:00a	1. Received By 	Date 10/15/12	Time 0845
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

* Return code - with 2-1 liter wide mouth bottles

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Lot No.: E2350191Condition Upon Receipt Form
St. Louis LaboratoryClient: STS CONSULTANTS
Quote No: 43710
Shipper/No: FEDEX 6152 3358 6922Date: 10/15/02 Time: 085
Initiated by: CHRIS CLIFFORD
COC/RFA Numbers: 147652

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1. <input checked="" type="radio"/> N	Sample received in undamaged condition.	5. <input checked="" type="radio"/> N	Sample volume sufficient for analysis.
2. <input checked="" type="radio"/> N	Sample received within $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ Record temperature: <u>6</u>	6. <input checked="" type="radio"/> N	Sample received with Chain of Custody.
3. Y <input checked="" type="radio"/> N	Sample received with proper pH**.	7. <input checked="" type="radio"/> N	Chain of Custody matches sample IDs on containers.
4. <input checked="" type="radio"/> N	Sample received in proper containers.	8. Y <input checked="" type="radio"/> N	Custody seal received intact and tamper evident on cooler.
		9. Y <input checked="" type="radio"/> N	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes: 8-9 NO SEALS

Sample IDs has H-155-6' and on the chain
it has H-15.5-6, it didn't have the 1 liter glass or
the 1/2 liter glass on the jar.

Corrective Action:

- ☐ Client's Name: _____ Informed verbally on: _____ By: _____
- ☐ Client's Name: _____ Informed in writing on: _____ By: _____
- ☐ Sample(s) processed "as is".
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: [Signature]Date: 10/15/02Project Management Review: [Signature]Date: 10-15-02

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE
THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED
IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR
INITIALS AND THE DATE NEXT TO THAT ITEM



750 Corporate Woods Parkway
Vernon Hills, IL 60061
Phone: (847) 279-2500
FAX: (847) 279-2510

FACSIMILE TRANSMISSION**Date:** November 25, 2002**To:** Verneta Simon/Fred Micke USEPA Fax #: 312-353-9176

Kara Hughes Lakeshore East, LLC Fax #: 312-642-2773

Sean Bezark Altheimer & Gray Fax #: 312-715-4800

Barbara Magel Karaganis, White & Magel Ltd. Fax #: 312-836-9083

Mark Krippel Kerr-McGee Chemical LLC Fax #: 630-231-3990

Pages being transmitted, incl. Cover: 16**CC:** **Fax No.:****From:** Steve Komder **Phone:** 847-279-2500**Re:** Lakeshore East, 221 N. Columbus Dr., Chicago, IL☐ Urgent ☐ For Signature ☐ For Review ☐ Please Comment/Reply ☐ As Requested ☐ Original to Follow**Message:**

Attached is the monthly report for the Lakeshore East site at 221 N. Columbus Drive in Chicago, IL.
Please contact me with any questions.

IMPORTANT: This facsimile is intended only for the individual or entity to which it is addressed and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this facsimile is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return this facsimile to us at the above address via the United States Postal Service. Thank you.

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL (847) 279-2500 IMMEDIATELY



January 9, 2002

Ms. Verneta Simon, On-Scene Coordinator
Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Progress Report for December 2002, 221 N. Columbus Drive, Chicago, Illinois – STS Project No. 1-32193-XC

Dear Ms. Simon and Mr. Micke:

In accordance with the Work Plan¹ STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies actions taken during December 2002 and activities planned or expected during January 2003.

PROGRESS DURING DECEMBER 2002

- The excavation of the known areas of radiologically-impacted soil (Phase II) was completed in mid-December. A total of 156-3/4 containers of impacted soil were loaded as of the end of December.
- Verification signoff by the USEPA on the remediation of numerous areas in the former northern slip area was obtained in December. The table below summarizes the Phase II signoffs received from the USEPA through the end of December for the project.

Summary of Signed Verification Forms

Location	Grid Designation	USEPA Signature Date
Northern Slip Area	NN-PP, 42-45	12/10/2002
	JJ-OO, 8-11	12/10/2002
	JJ-OO, 11-13.5	12/10/2002
	JJ-OO, 13.5-16	12/10/2002
	CC-FF, 1-4	12/10/2002
	EE-FF, 12-14	12/10/2002
	SS-UU, 32-34	12/10/2002
	XX, 18	12/10/2002
	GG-HH.5, 32-38	12/3/02
	HH.5-KK, 32-38	12/3/02
	KK-LL.5, 32-38	12/3/02
	LL.5-MM, 32-38	12/3/02
	OO-TT, 17-19.5	12/3/02
	OO-TT, 19.5-22	12/3/02
	RR-SS, 43-45	11/19/02
	KK-MM.5, 54-56.5	11/19/02
Southern Slip	KK-OO, 41-44	11/19/02
	E-K, 1-13	11/19/02
	C-E, 9.5-10.5	11/19/02
	F-J, 29-35	10/18/02

¹ STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

- With the completion of the excavation of the impacted materials, area air monitoring was discontinued based on verbal approval by USEPA on December 6. The verbal approval was confirmed in writing by USEPA on December 13, 2002. Personal air monitoring has been continued on a single individual within each field crew involved in gamma surveys for test pits and grading.
- A section of granite cobble roadway was exposed during the lift survey in the southern portion of grid 26. A gamma survey indicated that elevated gamma measurements of about 20,000 cpm was associated with the cobbles. The USEPA was contacted on December 13 and agreed that granite cobbles did not have to be handled as impacted material.
- Grading phase (Phase III) gamma survey activities continued in accordance with Section 5.7 of SOP-210. Several isolated areas of slightly elevated gamma readings were measured in grids 26, 28, 35 and 36 during the lift survey process. These areas were remediated on December 19, 2002. A total of eight "super-sacks" were filled during the excavation process. Excavation area air and personal monitoring was conducted during the remediation of the radiologically-impacted soils. The USEPA completed verification surveys and signed notification of successful verification survey forms on December 23, 2002 (refer to verification forms for areas 26C-D, 28A, and 35B-36A).
- Grading phase lift survey activities are currently in progress in grid locations 28 and 36. Surveys of the historical fill in grid locations 16, 17, 25, 26, 27, 34, 35, 37, 38, 39 and 40 are complete (refer to Figure 1). Additionally, the gamma surveys conducted following the grubbing operations completed the grading phase survey requirements in grids 1, 2 and 5. These areas did not require additional grading following grubbing because the layer of historical fill material was absence or presence only in a very thin layer.
- Site-wide topsoil (upper 6") and tree removal (grubbing) was initiated the week of December 16. A gamma survey was conducted of the soil surface exposed following the grubbing process. No elevated gamma readings were measured during the grubbing surveys. The grubbing activities were completed on December 24, 2002.
- Test pits were excavated to locate existing utilities and proposed caissons. The historical fill at the excavations was surveyed for elevated gamma radiation as the work proceeded. Elevated gamma readings were measured at five of the proposed caisson locations. These areas were within the western end of the southern slip in grid location 36 (refer to Figure 1). The areas have been roped-off as "exclusion zones" until remediation and verification surveys are complete.

PLANNED ACTIVITIES FOR JANUARY 2003

- Test pits for locating existing utilities and/or proposed caissons within historical fill or the former slip areas will be conducted. These areas will be surveyed for elevated gamma radiation as the explorations proceed.
- Grading phase (lift) surveys of historical fill will continue to be conducted at the site.
- The USEPA will be requested to provide comments regarding the casing survey (STS, 11/6/02) conducted below the watertable in the boring E-25 area of the southern slip.
- Excavation activities will take place as necessary to remediate radiologically-impacted soil discovered during the grading phase lift surveys or the utility/proposed caisson location investigations.

- In accordance with the approval issued by the USEPA on December 13, 2002, area air monitoring will only be conducted at the site during excavation activities involving radiologically impacted soils. Personal air monitoring will continue to be performed during excavation activities as well as during grading and test pit investigations.
- The USEPA will be requested to conduct verification surveys following the completion of the remediation of newly discovered areas of radiologically-impacted soil.

Preparation of the Site Closure Report will begin following completion of the removal of radiologically-impacted materials requiring excavation and the grading survey activities (Phase III). It is understood that the closure report is due within 60 days of notice that all fieldwork is complete.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.



Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Altheimer & Gray
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

